



# Health of Worcester 2012

Innovative. Connected. Accessible. Diverse. Collaborative. Visionary. Revolutionary. Industrious. Energetic. Neighborly. Vibrant. Historic. Cultured. Progressive.

Who we are, what our health status is  
and what the Division of Public Health's  
priorities are

B. Dale Magee, MD, MS

Derek Brindisi, MPA, RS

Director

Current as of March, 2012

Under the direction of City Manager Michael O'Brien your Division of Public Health is proud to present the 2012 Worcester Community Indicators Report created in partnership with the University of Massachusetts Medical School, the UMass Memorial Medical Center, St. Vincent Hospital, Common Pathways and Worcester residents and organizations who attended the April 28, 2011 Community Indicators Forum.

This report provides a "snapshot" of the City of Worcester's health. These indicators are focused specifically on the areas in which we need the most improvement and it is intended as a first step.

We invite residents, businesses and organizations to use this data and join forces with us to work together to improve those factors that most affect our health and quality of life.

# Community members who have provided input:

- **Common Pathways:** Clara Savage, EdD
- **Boys & Girls Club:** Judy Kirk
- **Diocese Of Worcester Schools:** Delma Josephson, EdD
- **Food & Active Living Policy Council**
- **Greater Worcester Research Bureau:** Roberta Schaffer, PhD
- **Health Foundation of Central Mass:** Janice Yost, EdD, Elaine C. Cinelli, MPA
- **Hector Reyes House:** Matilda Castiel, MD
- **Hunger Free & Healthy:** Liz Sheehan-Castro
- **Latino Advisory:** Benito Vegas,
- **Mass Senate:** Hon. Harriet Chandler, PhD
- **Mosaic:** Brenda Jenkins
- **Pioneering Healthier Communities**
- **Regional Advisory Council for Children**
- **Regional Environmental Council:** Steve Fischer
- **Spectrum Heath:** Chuck Feris
- **Umass Medical School/Commonwealth Medicine:** Abigail Averbach, MSc; Christopher Boyd, MPA , Kola Akindele, JD; Susan Cashman, ScD; Lee Hargraves, PhD; Catarina Kiefe, MD/PhD; James Leary, JD; Stephanie Lemon, PhD; Marianne Felice, MD
- **UMass Memorial Medical Center:** John O'Brien, MBA; Monica Lowell, BA; Gary Lapidus, BS; Cheryl Lapriore, MBA
- **United Way of Central MA:** Tim Garvin
- **Vanguard-St. Vincent Hospital:** Dennis Irish
- **Worcester Public Schools:** Melinda Boone, EdD

# What's New in this report since June 2011?

- Population Profiles, Deaths, Admissions, ER Visits, Infection incidence & Disease prevalence have been updated to the extent possible
- Citywide Youth Survey 2011
- Profile of Black Community
- Survey for Report users to give us feedback

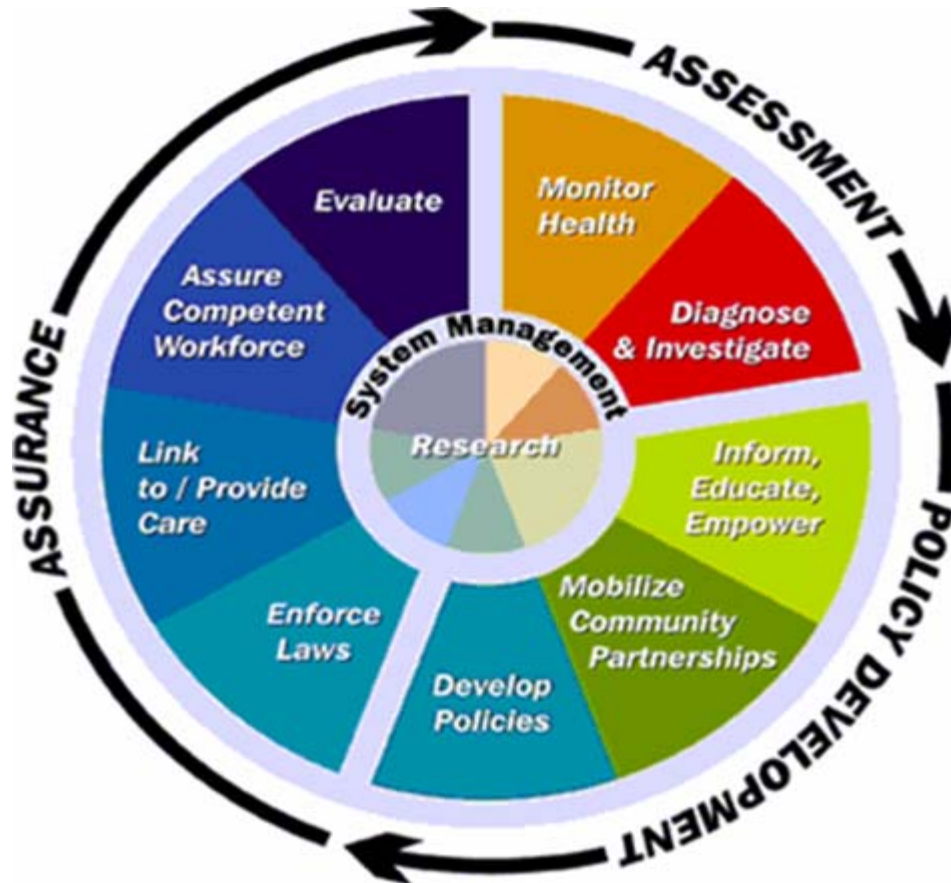
# Accessing this report:

This report is the public face of your Department of Public Health's information system for monitoring the health of our community and setting priorities. It is updated continuously.

In addition to the base report, you will see links throughout the report that will bring you to more detail on a subject. There are over a dozen enhancements available as well as web links to more information on a topic.

# Your Division of Public Health

Assess, Develop Policies & Procedures, Assure Effects

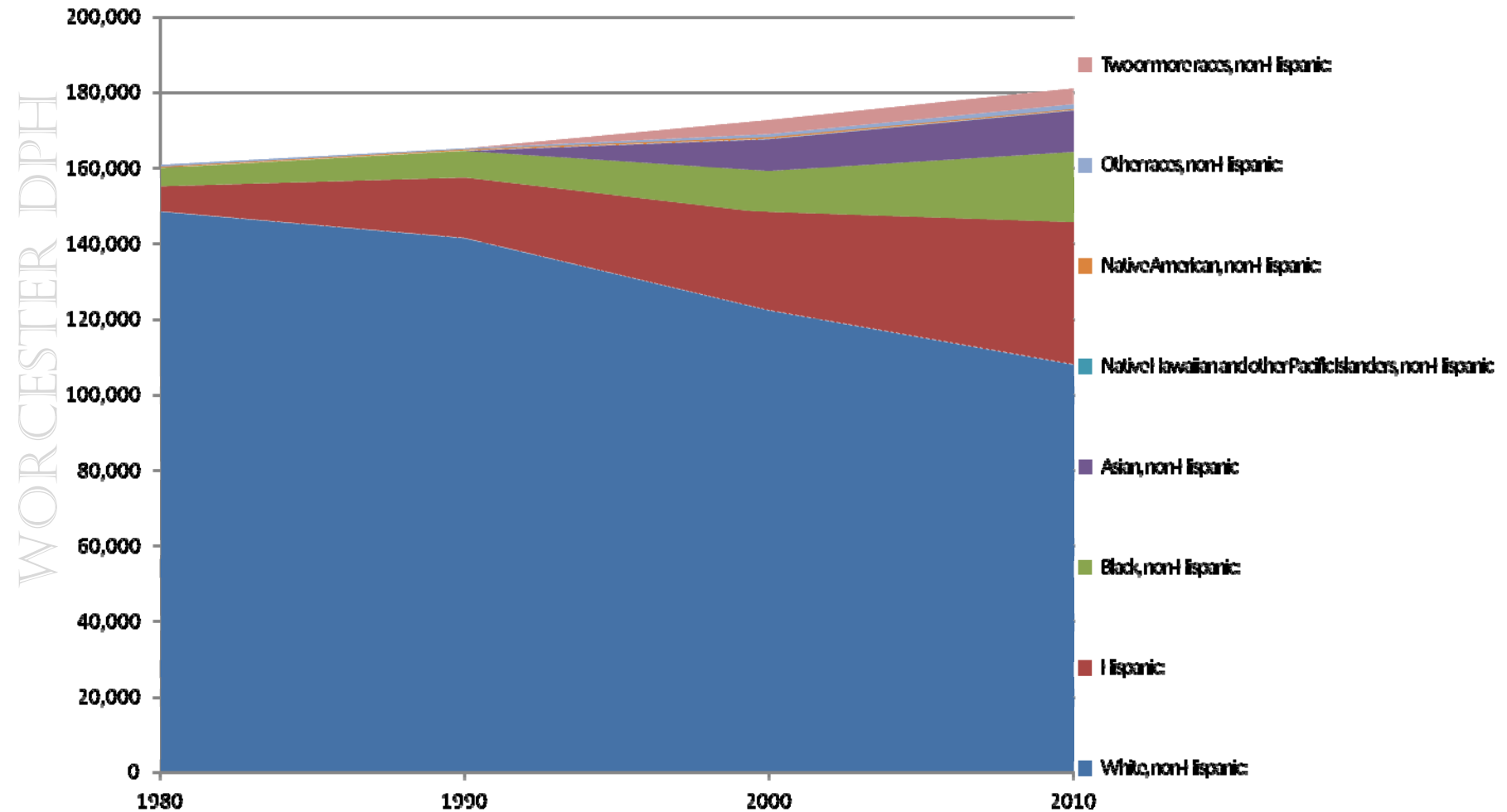


The goal of this report is to help everyone to focus, prioritize and improve the health of our community

# Structure of this Report

- ✓ Profile of Worcester Residents
- ✓ Socioeconomic Indicators
- ✓ Habits that place us at risk for poor health
- ✓ Prevalence of disease
- ✓ Use of health services
- ✓ Causes of death
- ✓ Priorities for the Department of Public Health
- ✓ Actions to improve health

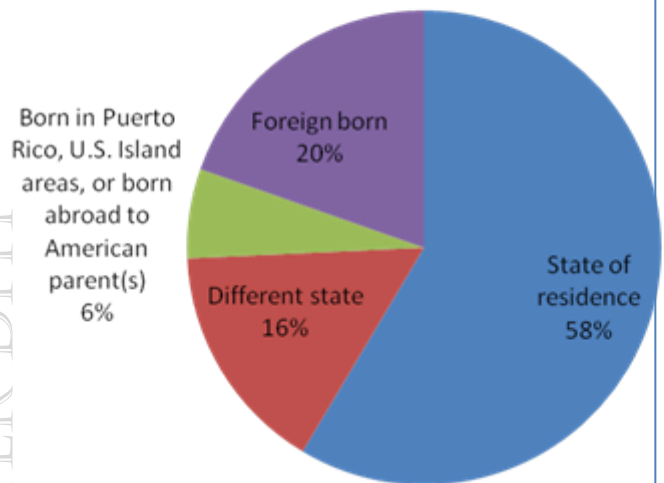
# Worcester's Population has grown and become more diverse



Source: U.S. Census

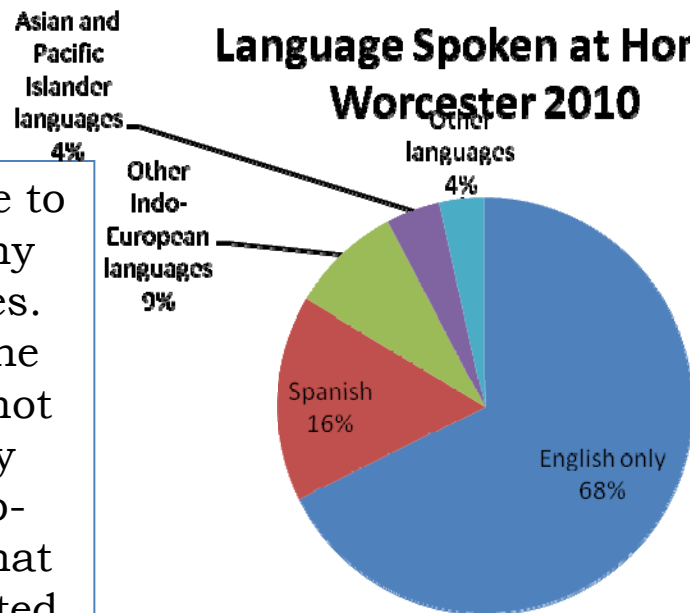


## Place of Birth- Worcester Residents 2010



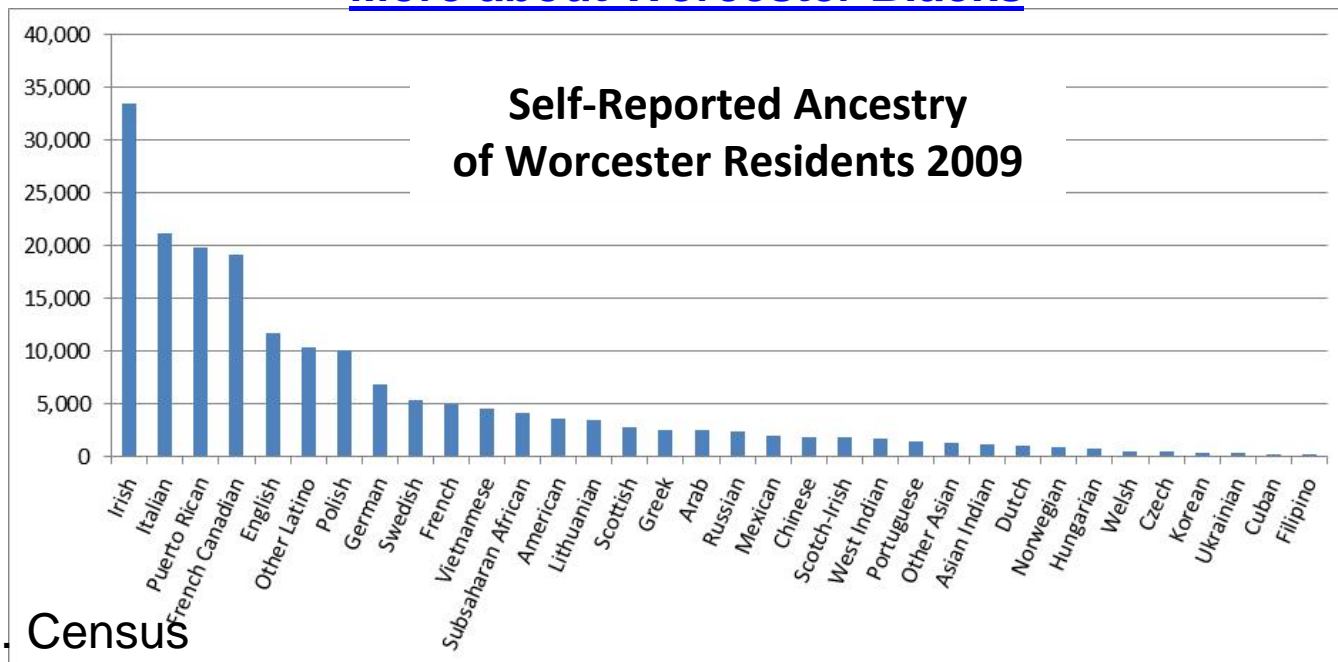
Worcester is home to groups with many different heritages. This data from the US census does not reflect the many countries in sub-Saharan Africa that are now represented in our city.

## Language Spoken at Home- Worcester 2010

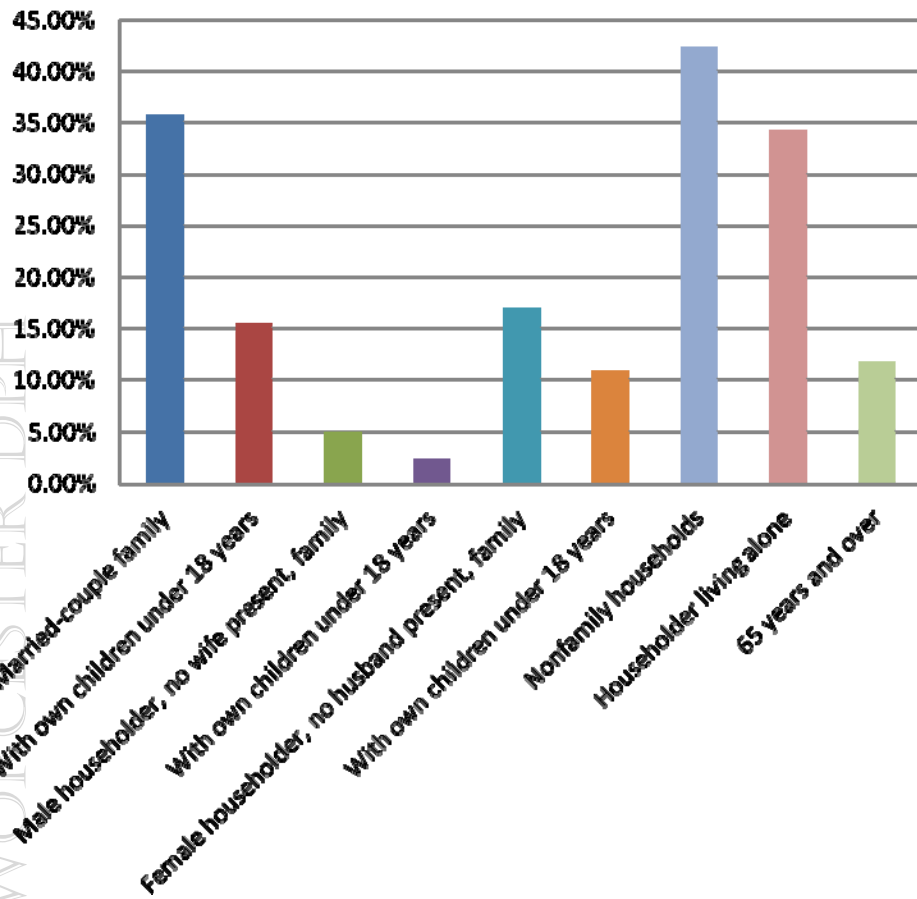


## More about Worcester Blacks

### Self-Reported Ancestry of Worcester Residents 2009

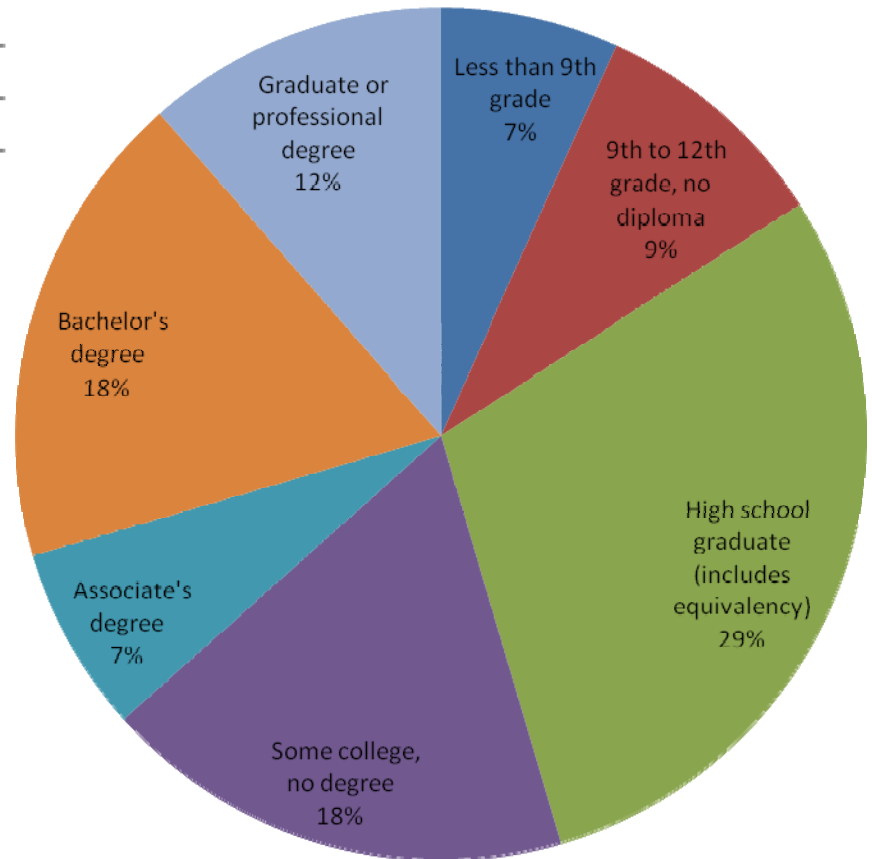


## Worcester Household Profiles 2010



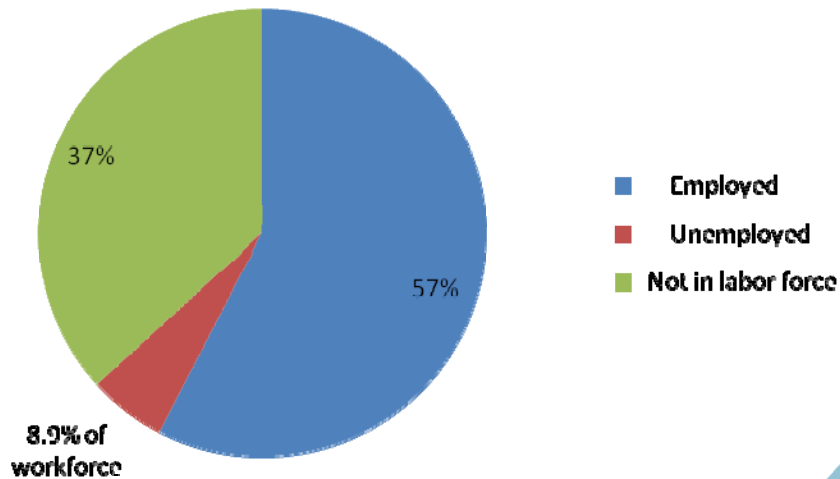
## Worcester Education 2010

age 25 and older



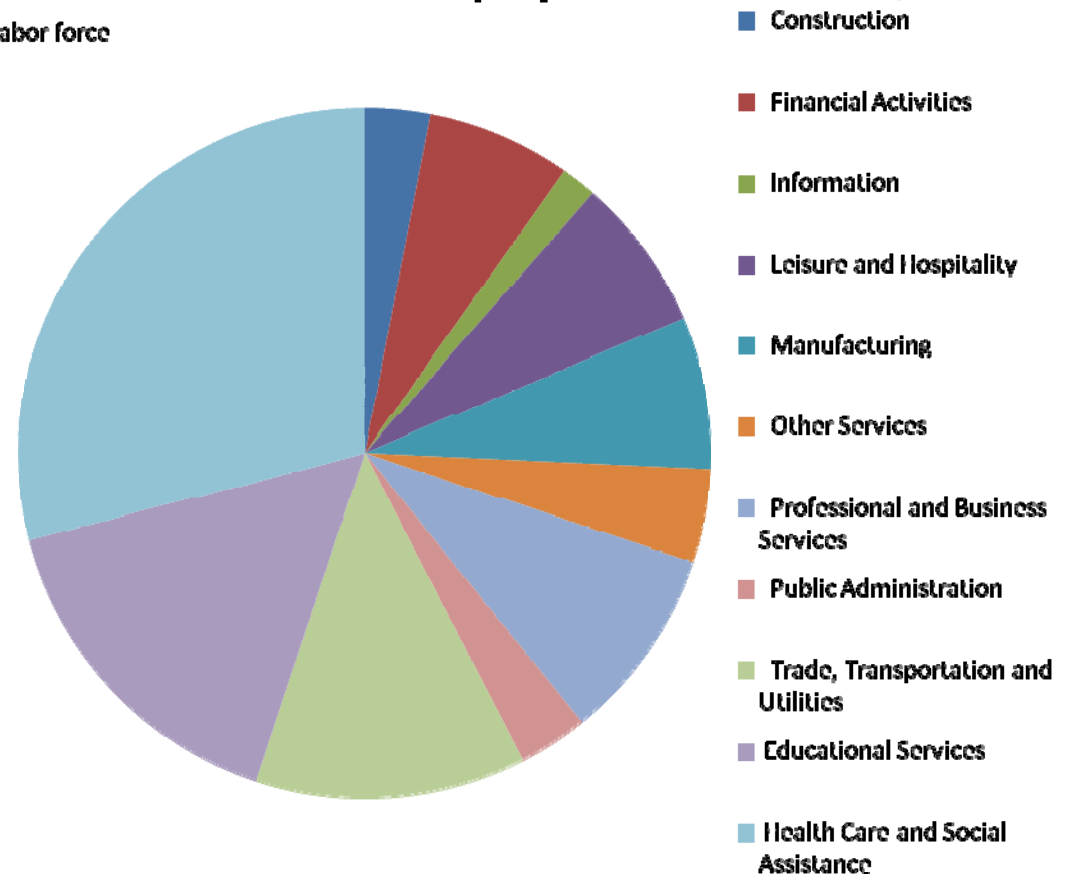
## Worcester Employment 2010

16 & over



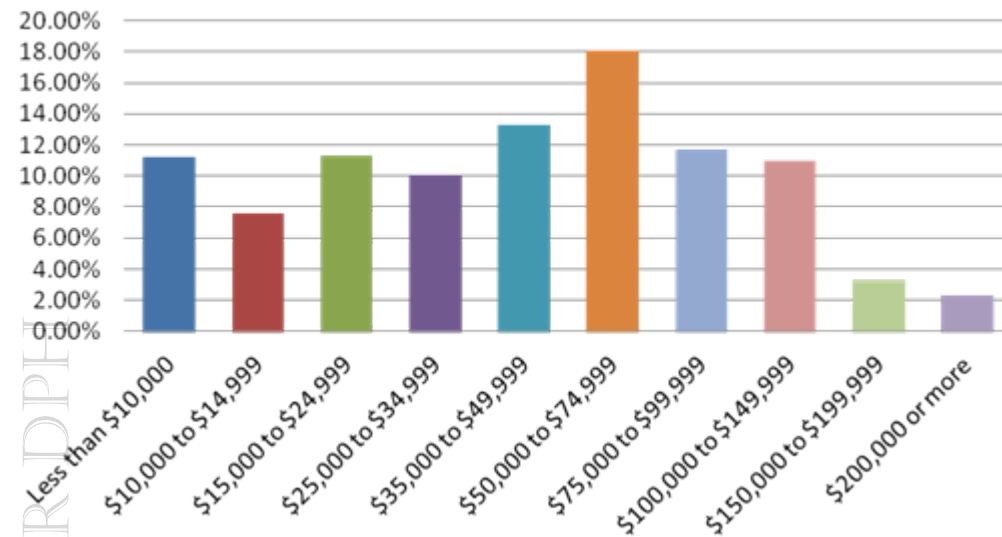
Although the unemployment rate for Worcester in 2010 was 8.9% of the labor force, about 35% of the population is not in the labor force. Of the employed, 45% are in health care, education & social services.

## Worcester Employment 2011 2nd Q



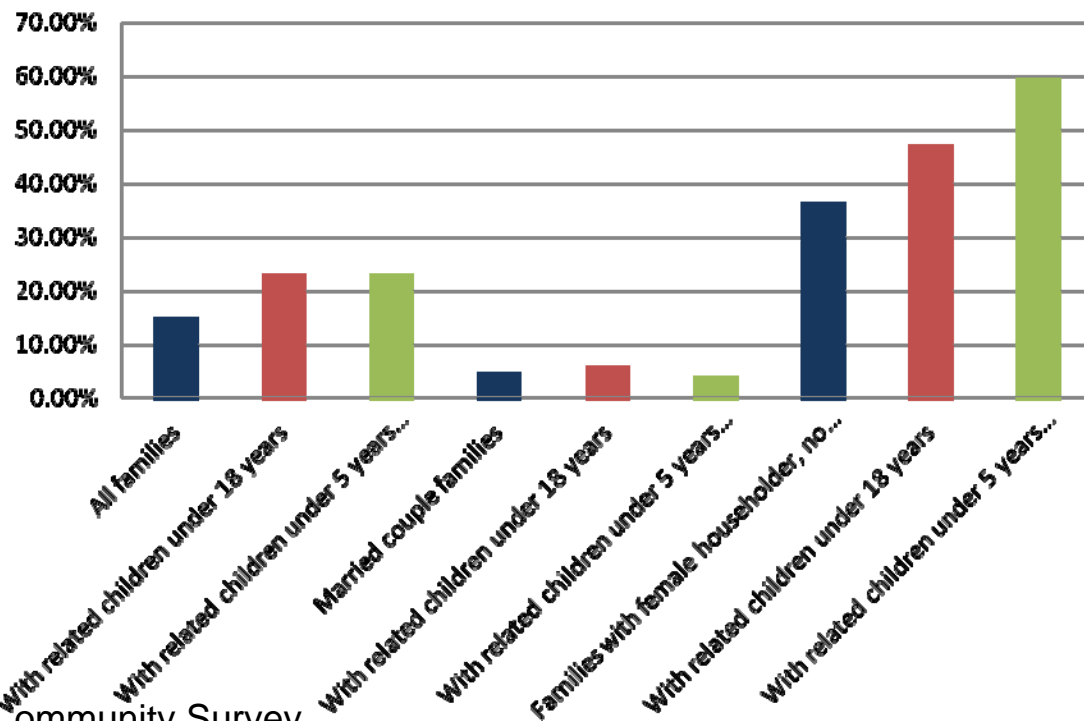
**Sources:** U.S. Census Bureau, 2010 American Community Survey  
Sector Employment: MA Dept Workforce Development

## Family Income-Worcester 2010



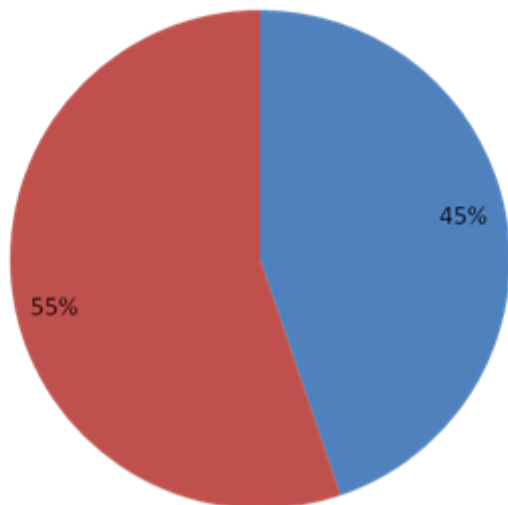
Overall, about 1 in 7 families are in poverty, however, about 50% of single mothers live in poverty.

## Poverty- Worcester Families 2010



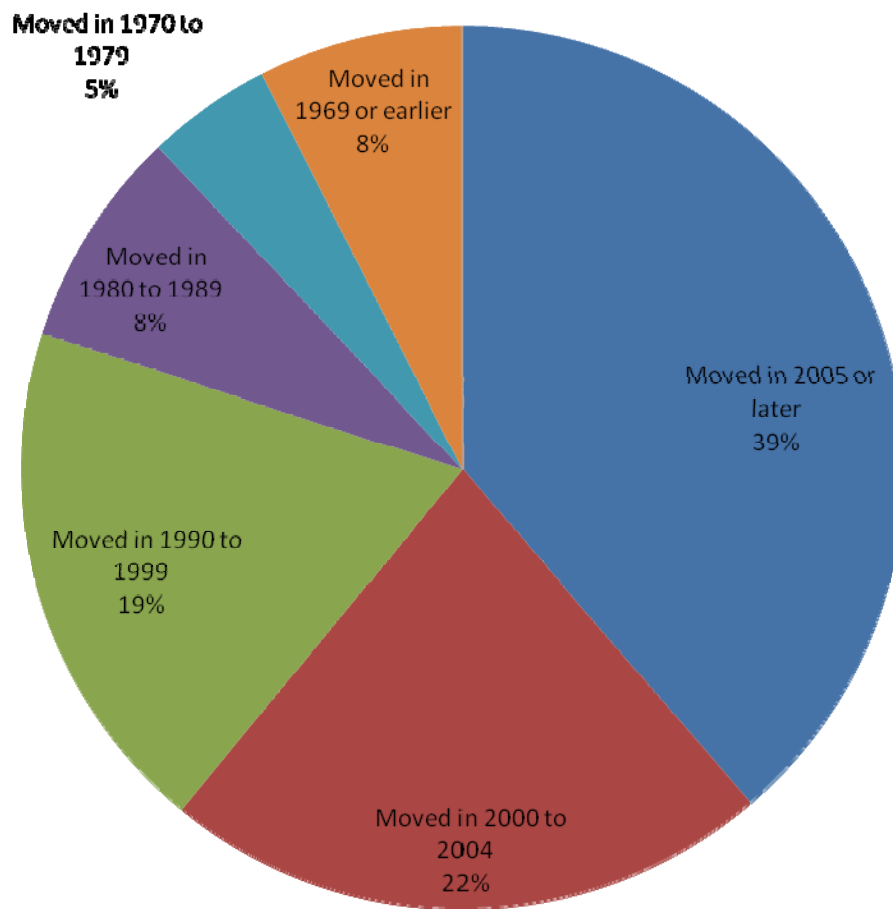
## Housing Worcester 2010

■ Owner-occupied housing units ■ Renter-occupied housing units



Over half of the housing in Worcester is renter occupied. Nearly 40% of the residents have been in their current home for less than 5 years.

## Year Householder Moved into Unit- Worcester 2010

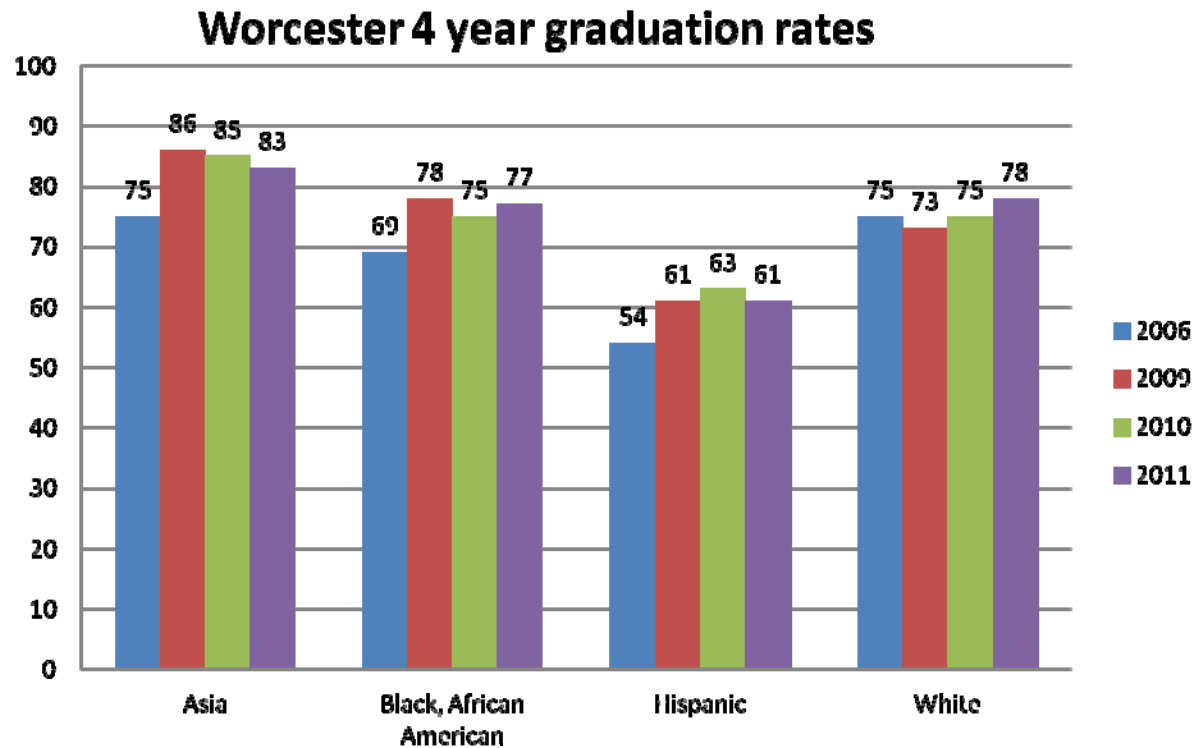


# Social Determinants

A number of individual characteristics affect health. Years of life can be gained by addressing the following risk factors:

- **Education**- the more the better
- **Single parenthood**- greater risks for poverty & infant mortality
- **Poverty**- sets up a cascade that is never fully corrected & leads to more disease & worse survival
- **Unsafe environment**- stress, injury, premature death
- **Substance abuse**: smoking, alcohol & drugs all decrease health and lifespans

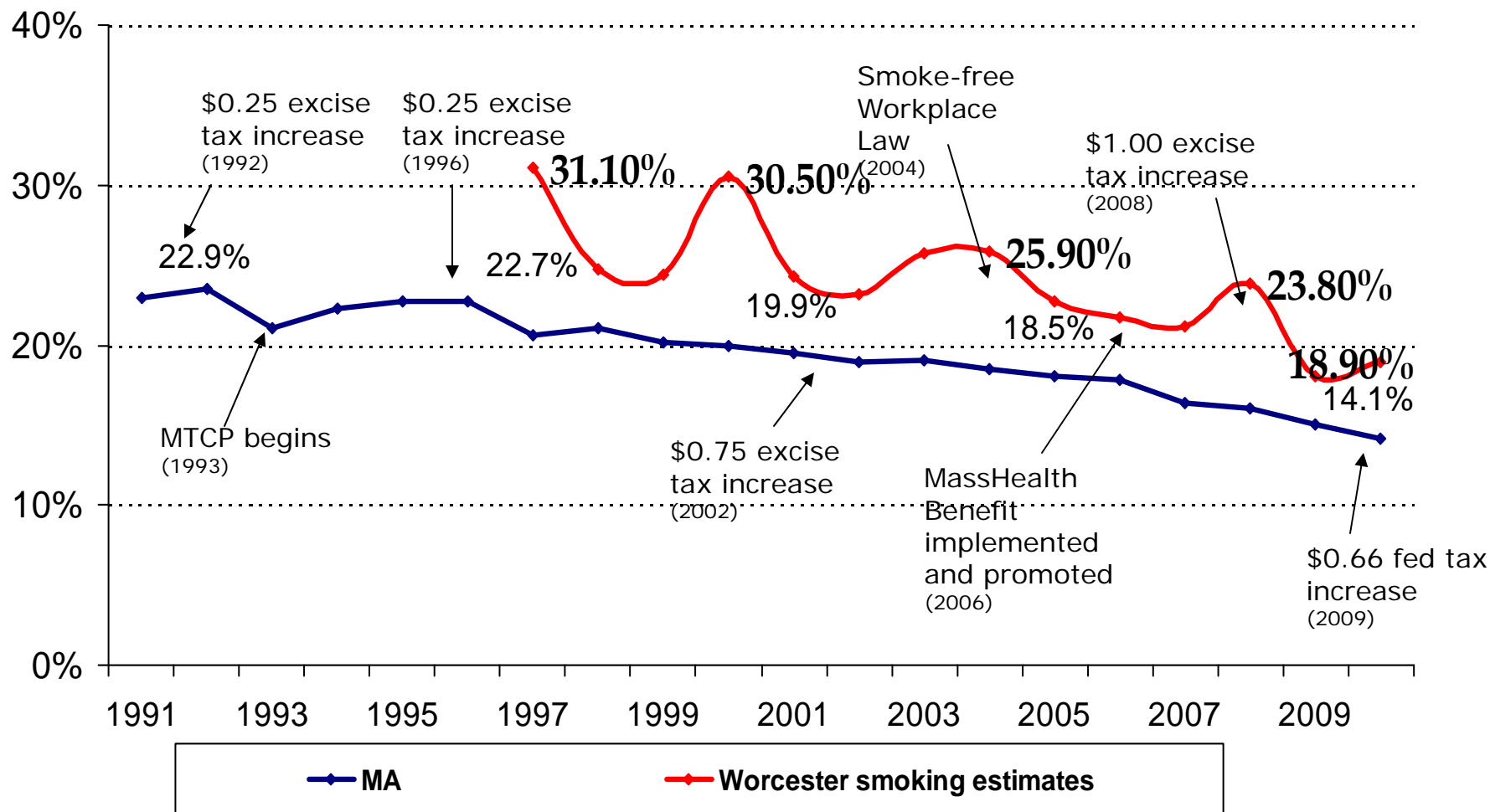
# Graduation from Worcester High Schools, by Race and Ethnicity



Over the past 5 years, Latino students were less likely to graduate than students from other backgrounds; Students from Asian heritage were most likely to graduate.

# Habits that place us at risk

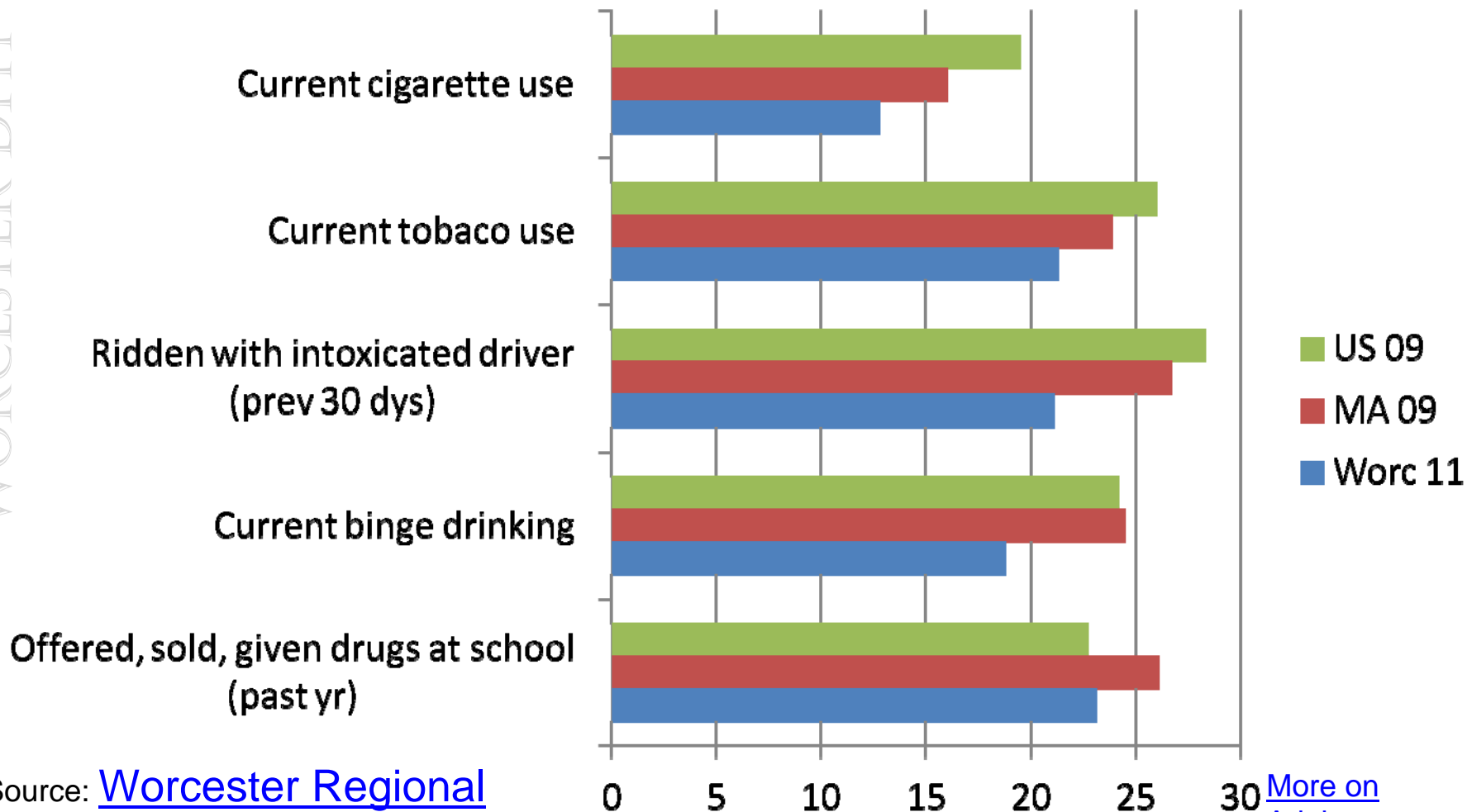
## Smoking Prevalence (Age 18+): Worcester & MA



Source: Massachusetts Behavioral Risk Factor Surveillance System



# Habits that place us at risk: Substance abuse by high school students

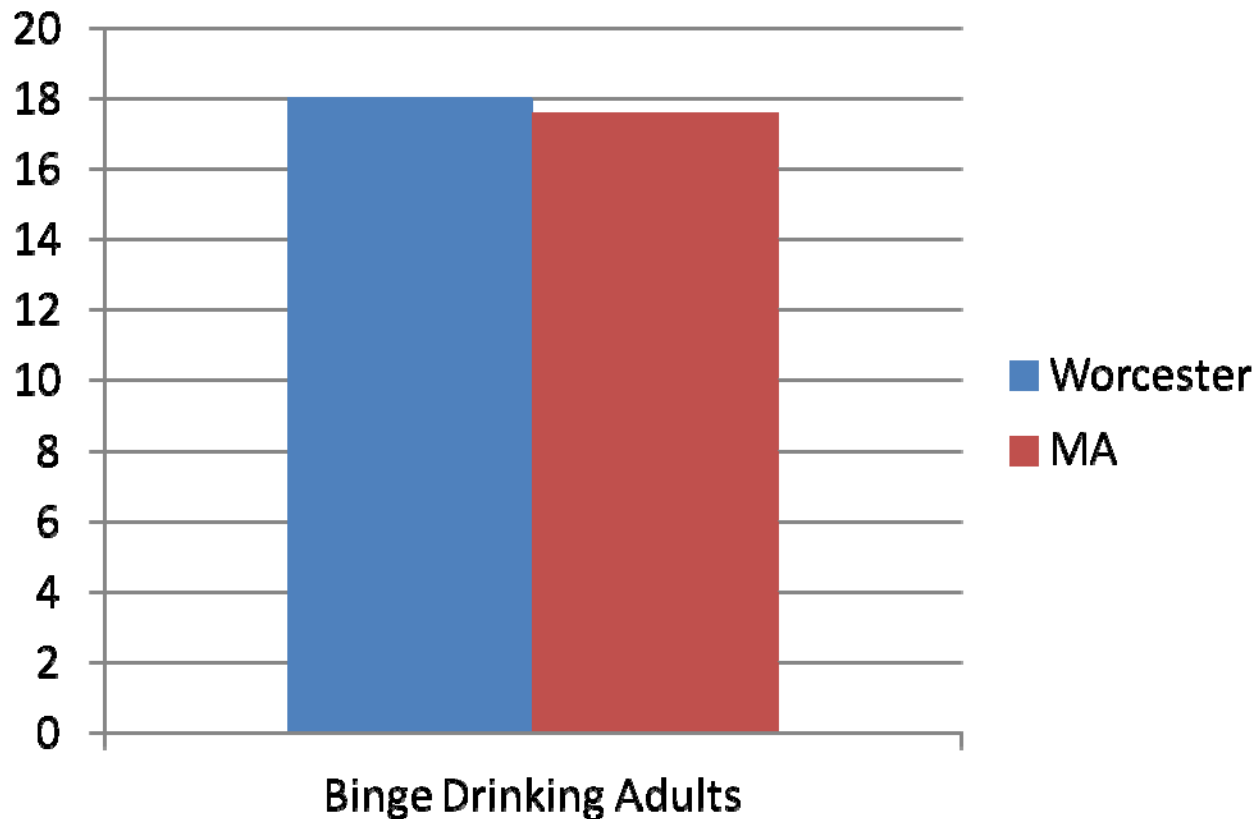


Source: [Worcester Regional Youth Survey 2011](#)

[More on Adolescent Substance Abuse](#)

# Habits that place us at risk

## Adult Binge drinking



# Habits that place us at risk

## Substance abuse: opioids\*

- Rehab admissions<sup>1</sup>: 4821 (2374 opioid) (2010)
- Overdose 911 calls<sup>2</sup>: 94(2011)
- ER visits<sup>1</sup>: 448 (2008)
- Hospitalizations<sup>1</sup>: 652 (2008)
- Deaths from opioid overdoses<sup>1</sup>: 29 (2008)

Sources: 1. MassCHIP 2. Worcester Police department \* all numbers estimates

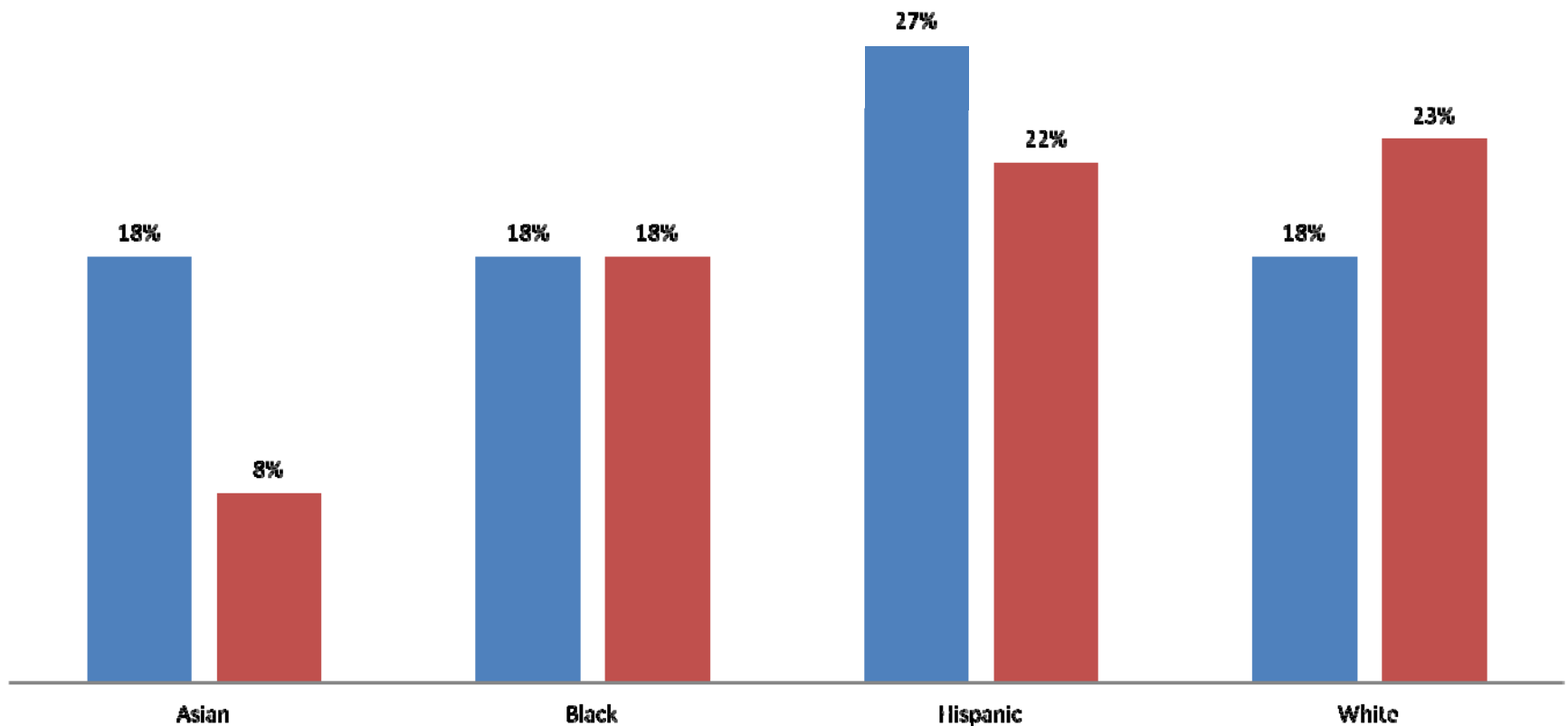
# Habits that place us at risk

## Obesity among children

2011

### Obesity in Worcester Public Schools

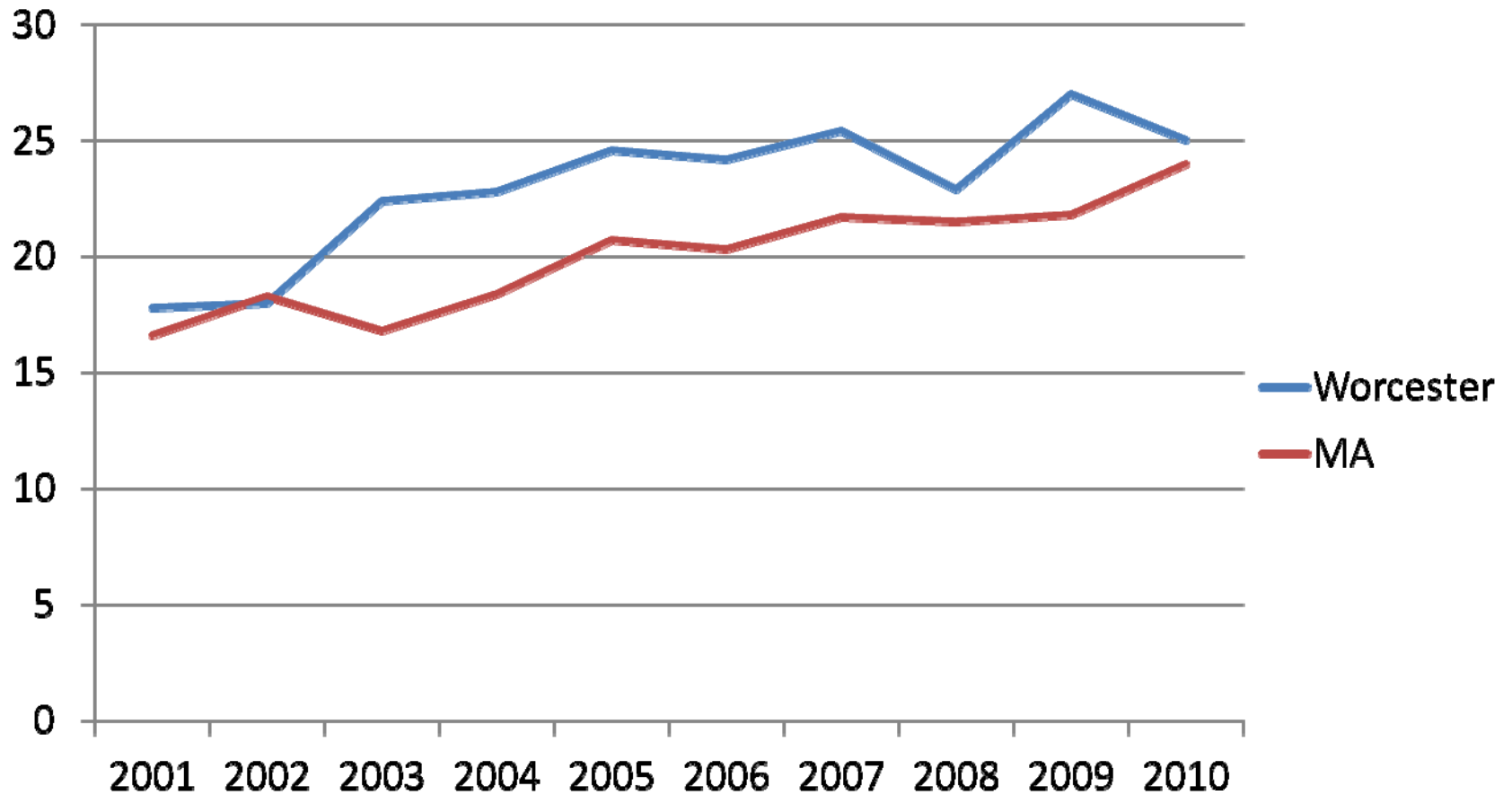
■ 1st Grade ■ 11th Grade



Source: Worcester School Dept. 2011

# Habits that place us at risk

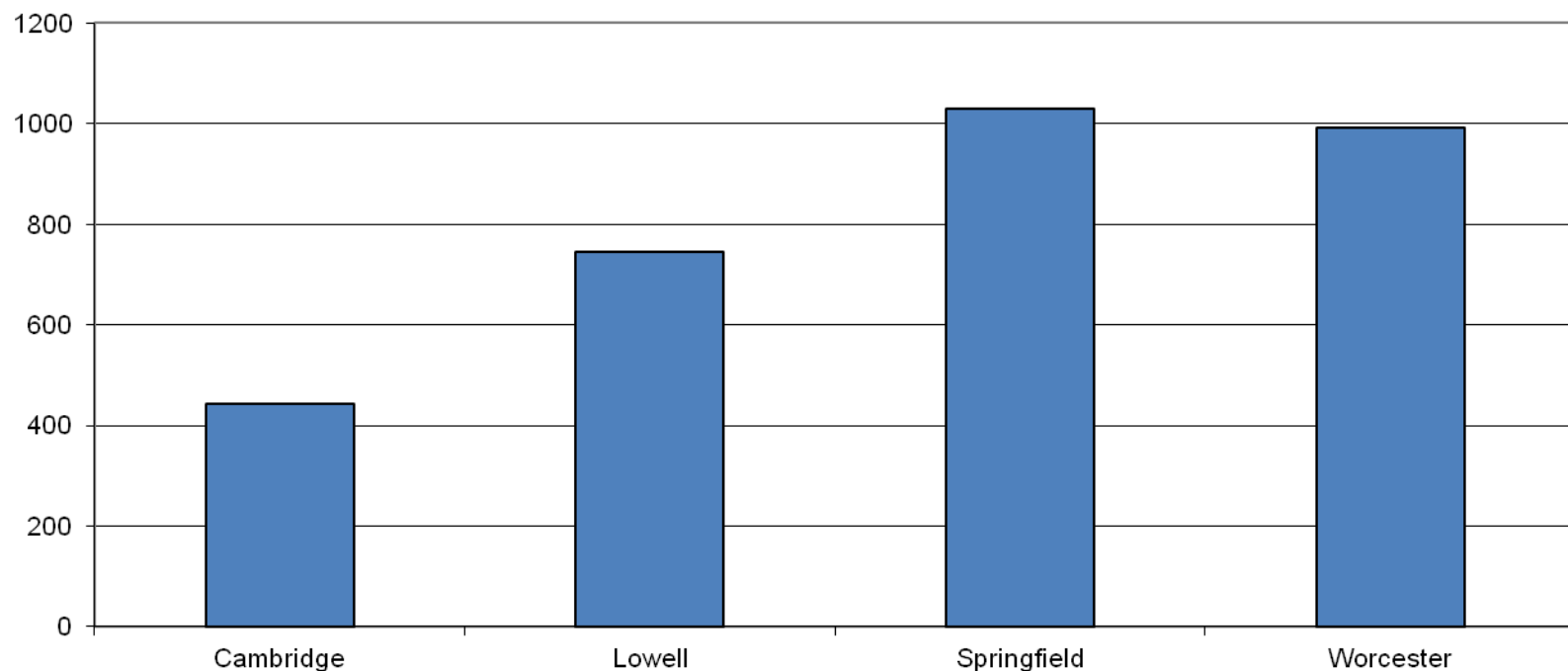
## Obesity among adults



Source: MassCHIP 2009 & CDC

# Crime rate

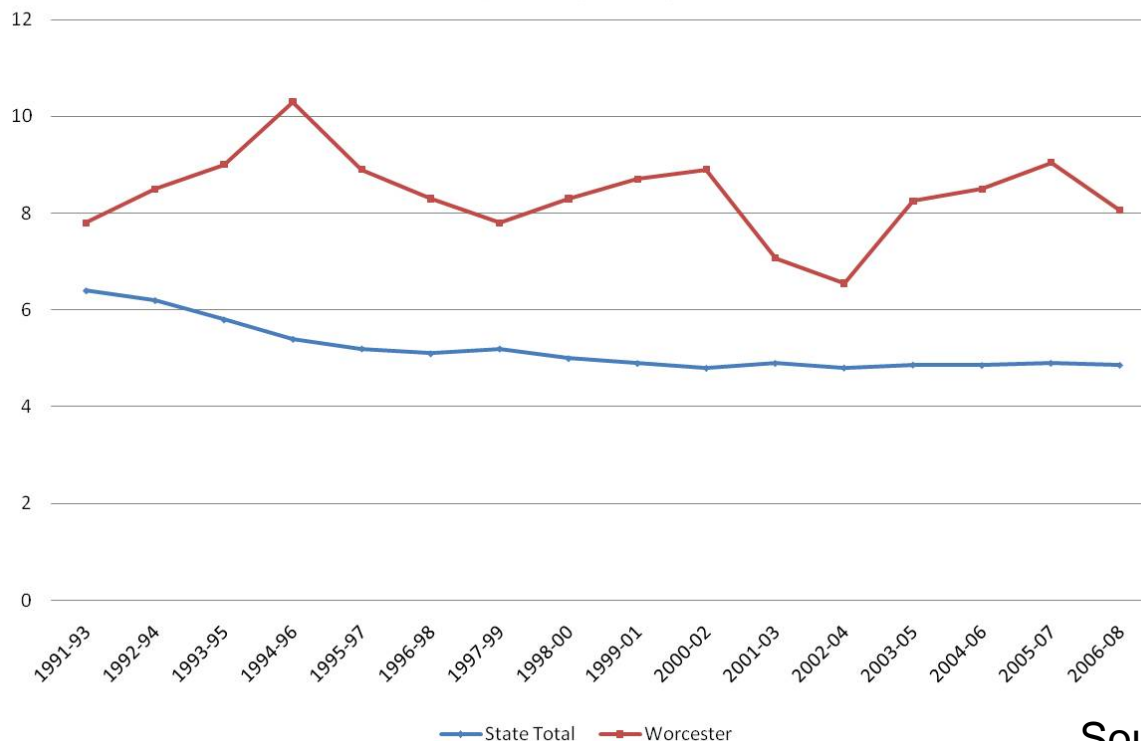
## Violent Crime Rate per 100,000 people



# Infant Mortality

Infant mortality is not only a sign of the health of infants but also of how well the mother, the family and the community function in caring for their most vulnerable. The rate is affected by medical and obstetric conditions, smoking and other substances, housing, diet, stress, environment and genetics. It is also affected by education, poverty & marital status. The rate is measured as the number of deaths before 1 year of age per 1,000 live births.

**Worcester & Mass Infant Mortality**  
3 yr rolling averages



Source: MassCHIP

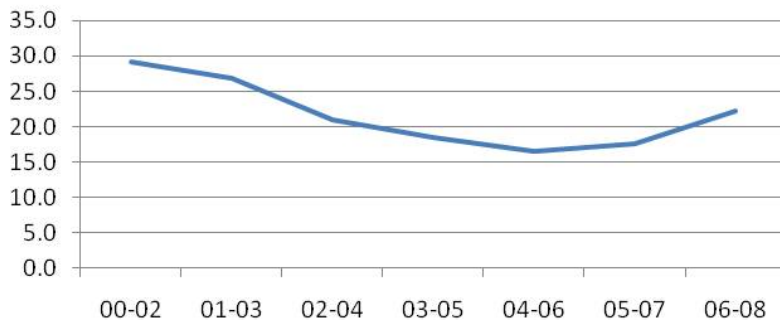
# Infant Mortality

Particularly high Infant Mortality rates have affected two populations in Worcester: Blacks and Latinos.

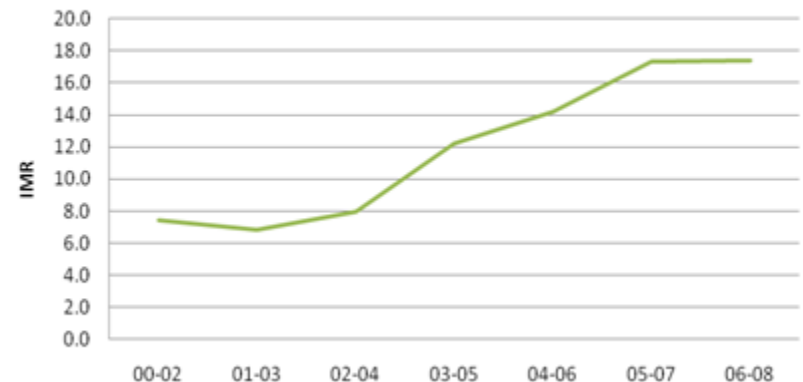
**Black** Infant Mortality relates to West African immigration where the rates can be over 50 in the country of origin. There are many stresses associated with immigration for this population and research is being done to better understand the causes.

**Latinos** have a number of socioeconomic risk factors including less education, more poverty, more teen pregnancies and more single mothers.

**Worcester Blacks**  
3 yr rolling avg IMR



**Worc Hispanic IMR 3 yr rolling avg's**



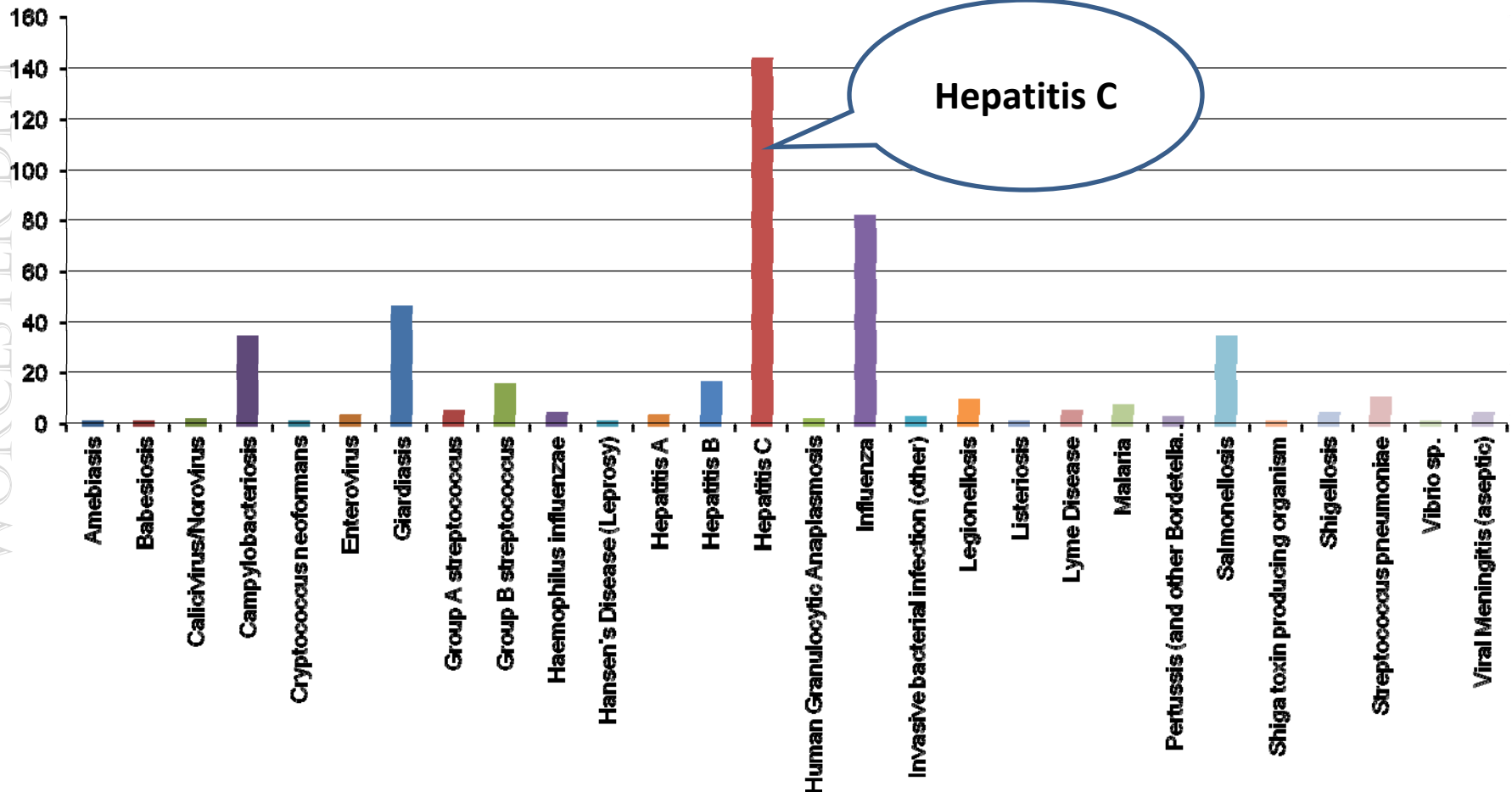
[More on infant mortality](#)

Source: MassCHIP



# Reportable infections- non-STDs

Worcester Reportable Diseases 2011

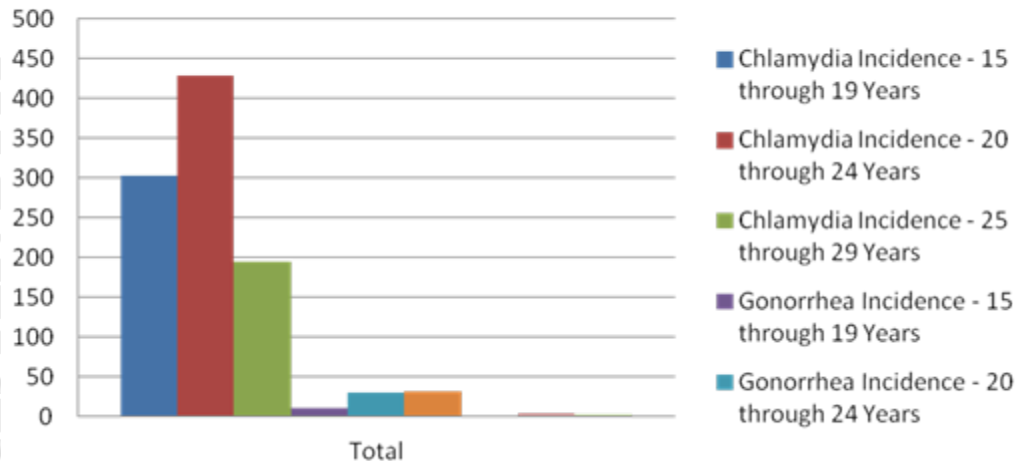


Hepatitis C is often the result of IV drug abuse and its incidence points to the significance of drug abuse in Worcester.

Source: WDPH MAVEN reporting system

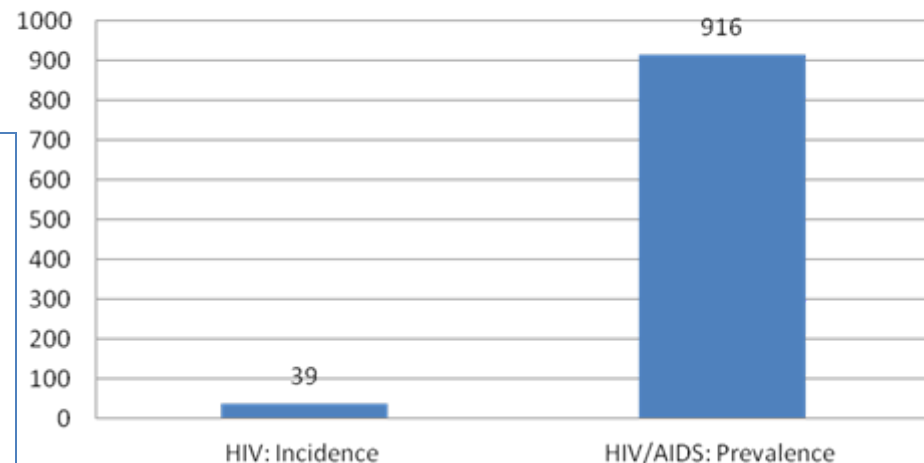
# Sexually transmitted infection

Worcester STDs 2010



Chlamydia is the most common sexually transmitted infection reported. Fewer than 2 dozen new cases of HIV are reported per year. There are now nearly 1,000 individuals living with HIV in Worcester. HIV has become a chronic disease with which people live long lives.

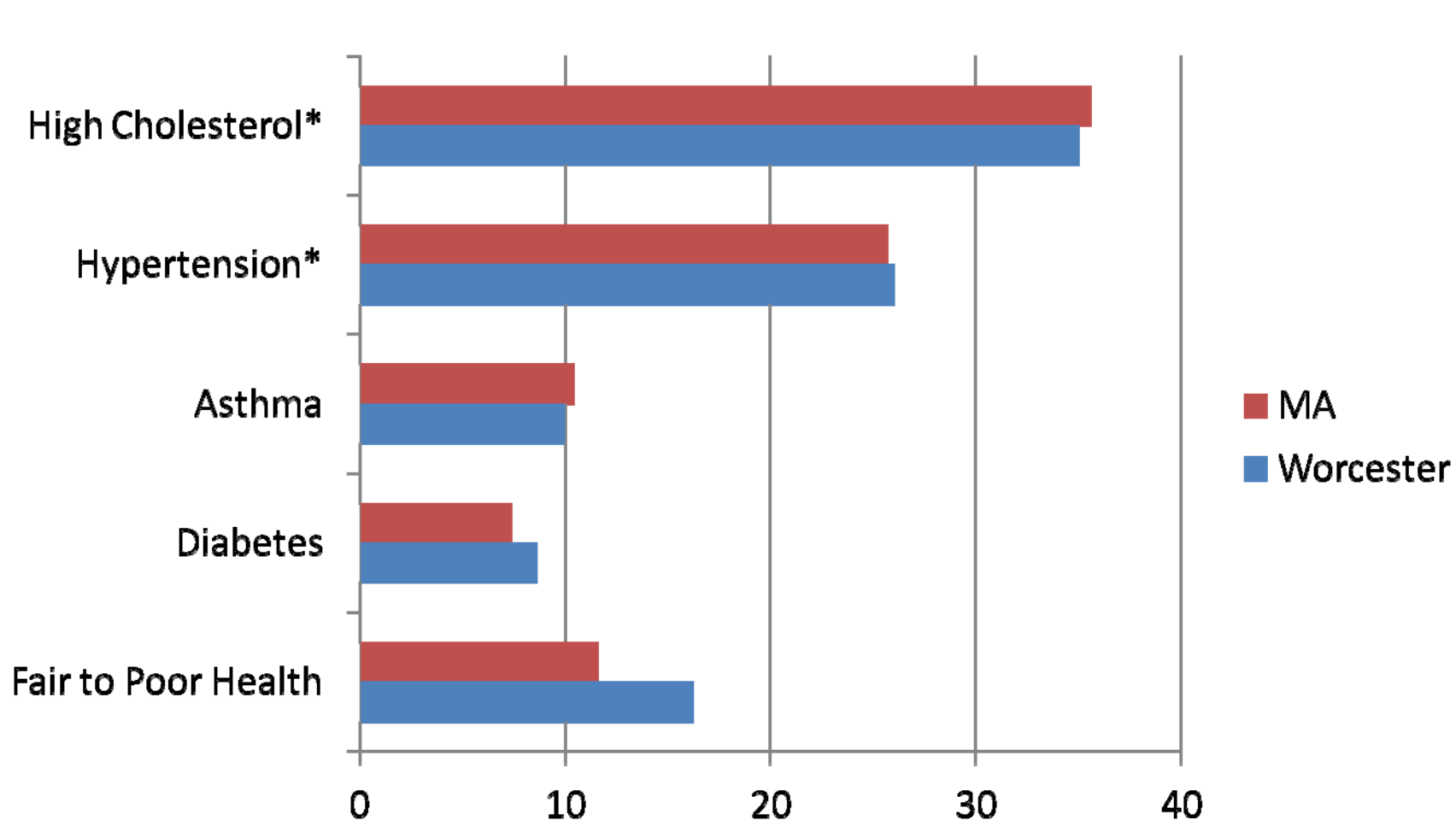
Worcester HIV/AIDS 2010



[More on HIV/AIDS in Worcester](#)

Source: MDPH

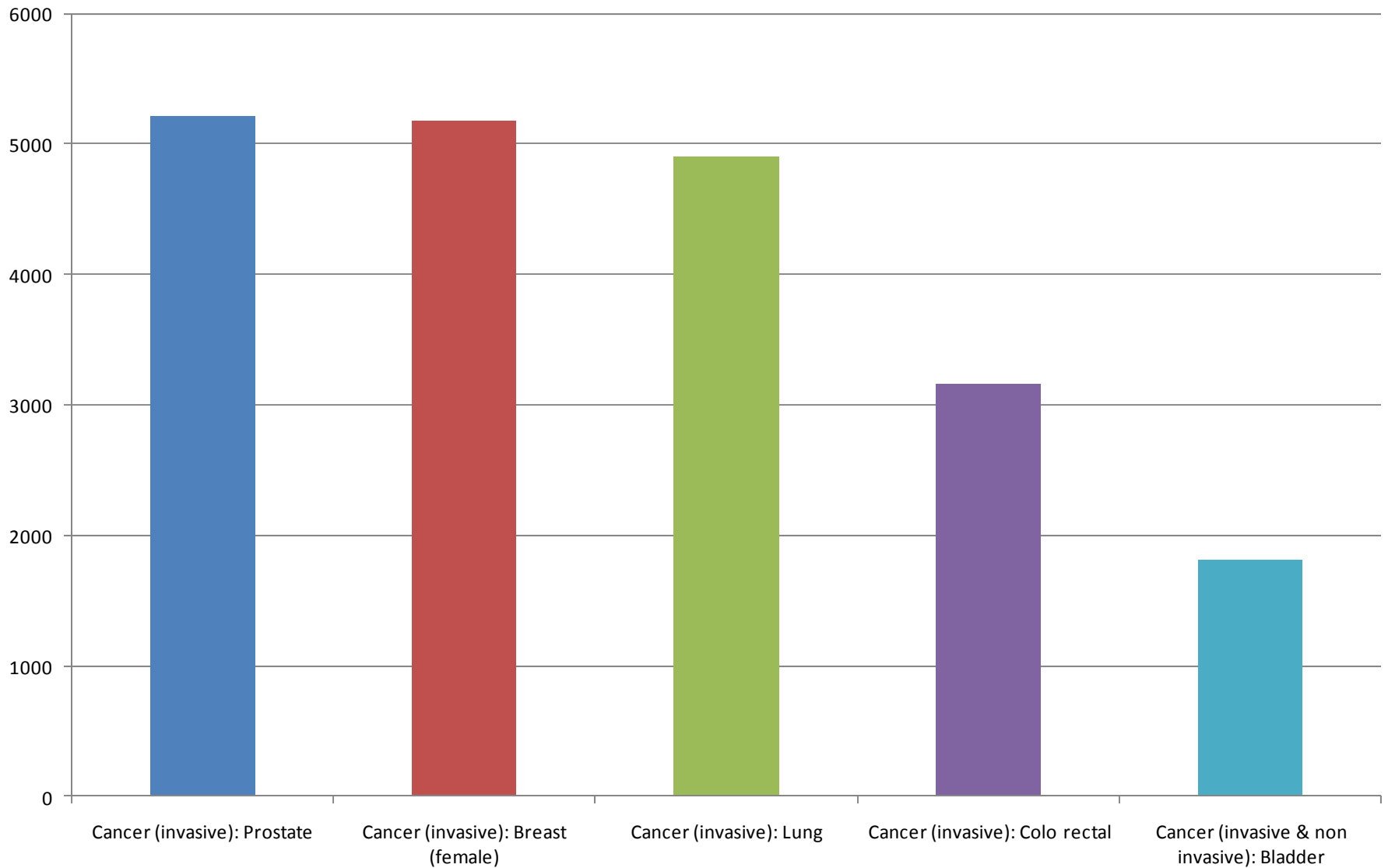
# Chronic Disease Worcester Adults 2010



Source: MassCHIP 2010 \*2009 data

# Top 5 Cancers in Worcester 2007

not significantly different from MA or US



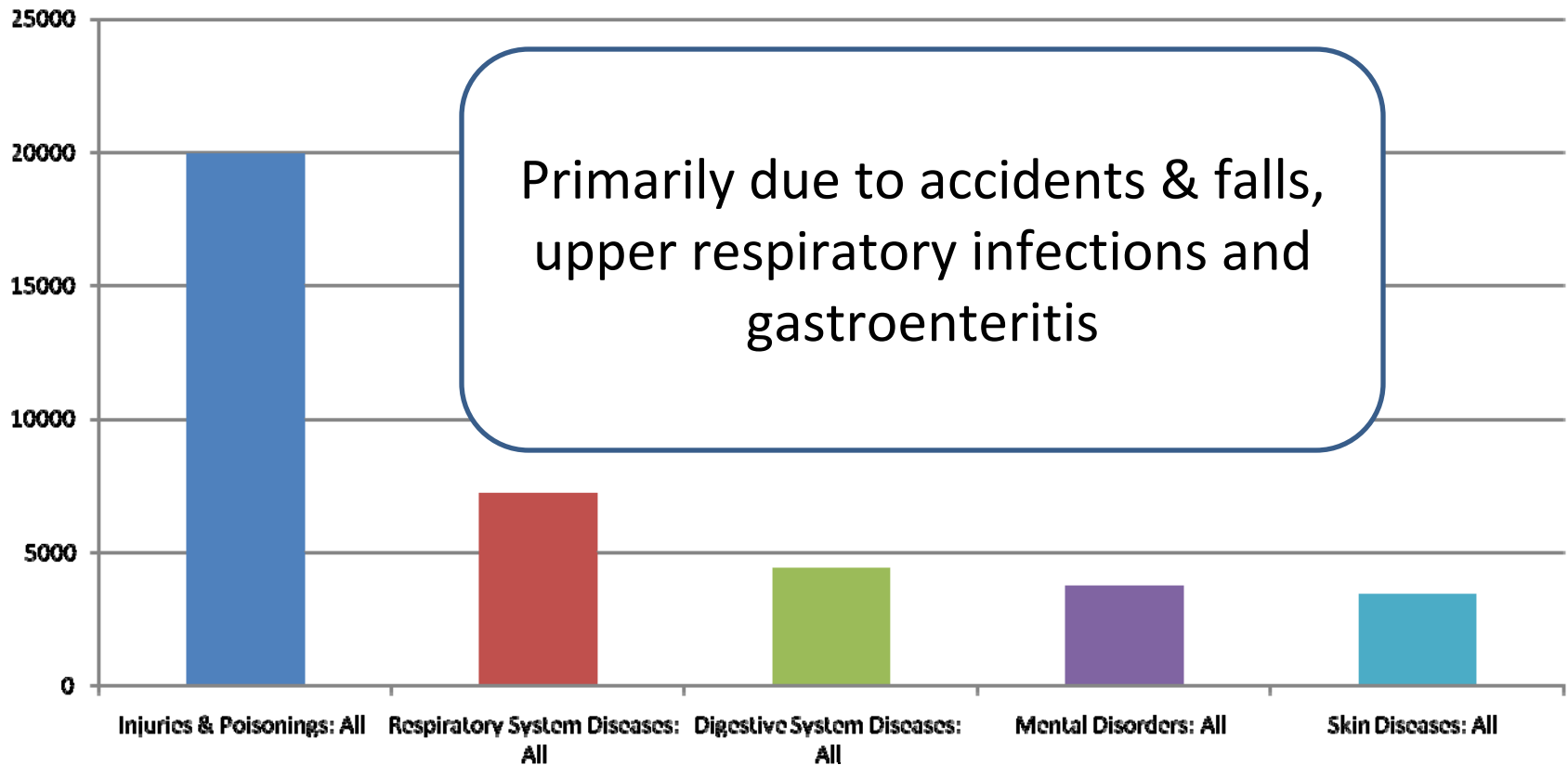
Source: Mass DPH

[More detail on cancer incidence](#)

# Use of health care services

## Acute illness- top 5 reasons for Emergency Room visits- Worcester 2008

Worcester-ER visits 2008

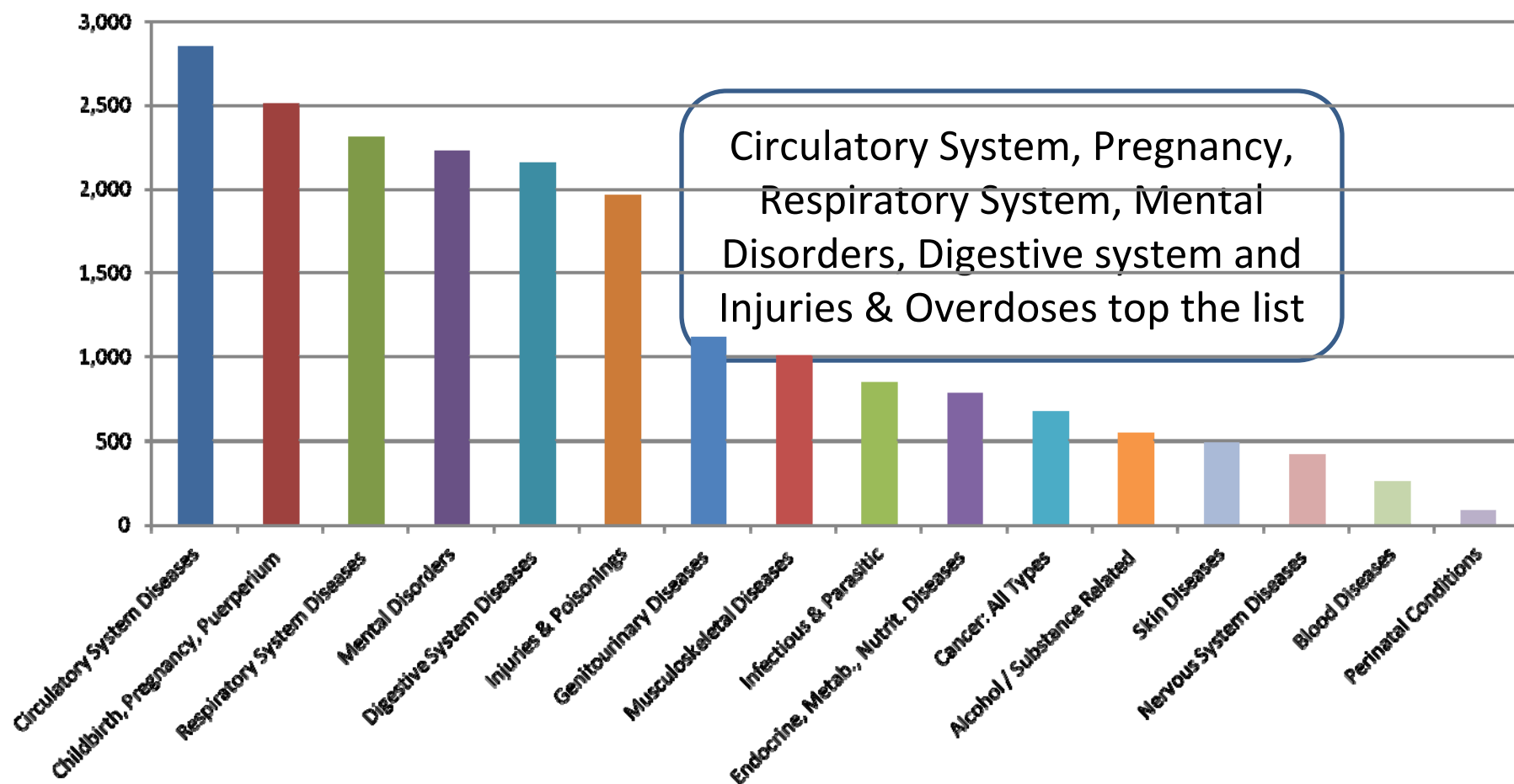


[More detail on ER visits](#)

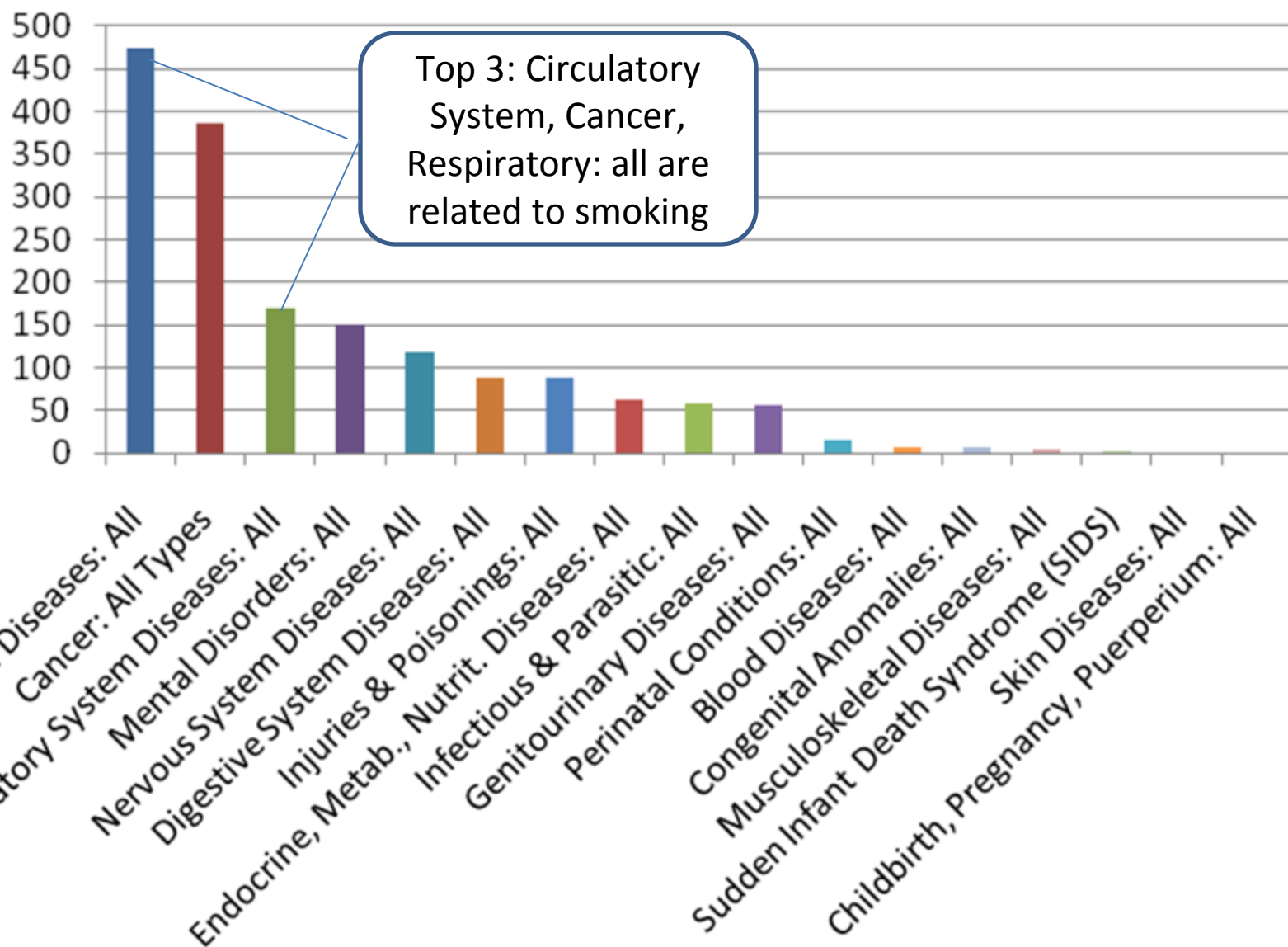
# Use of Health Care Services

## Hospitalization

### Worcester Hospitalizations 2009

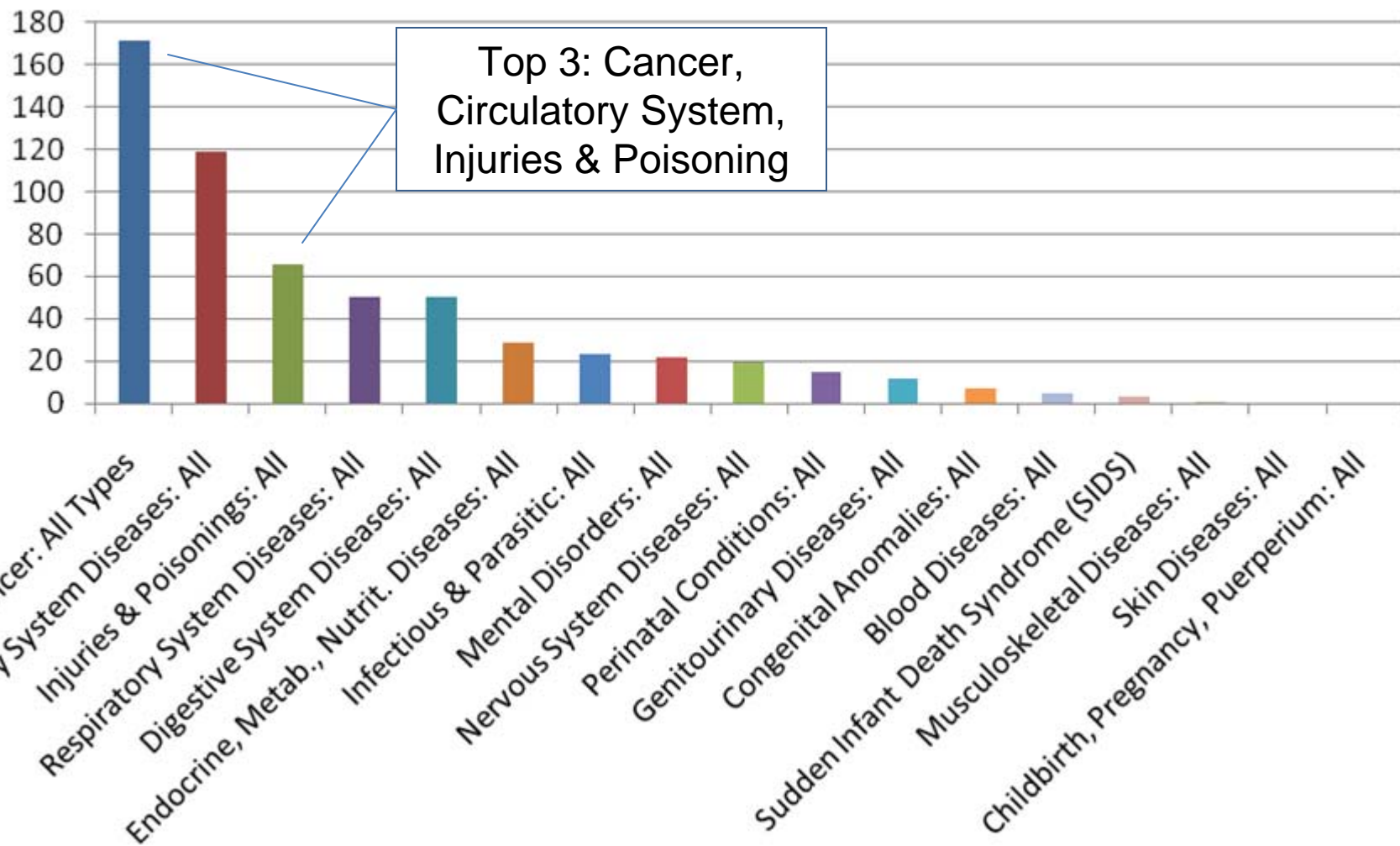


# Overall Causes of Death: Worcester 2008



**Premature Death (under age 75), is responsible for nearly 1/3 of Worcester Deaths. Nearly all of these should be able to be delayed**

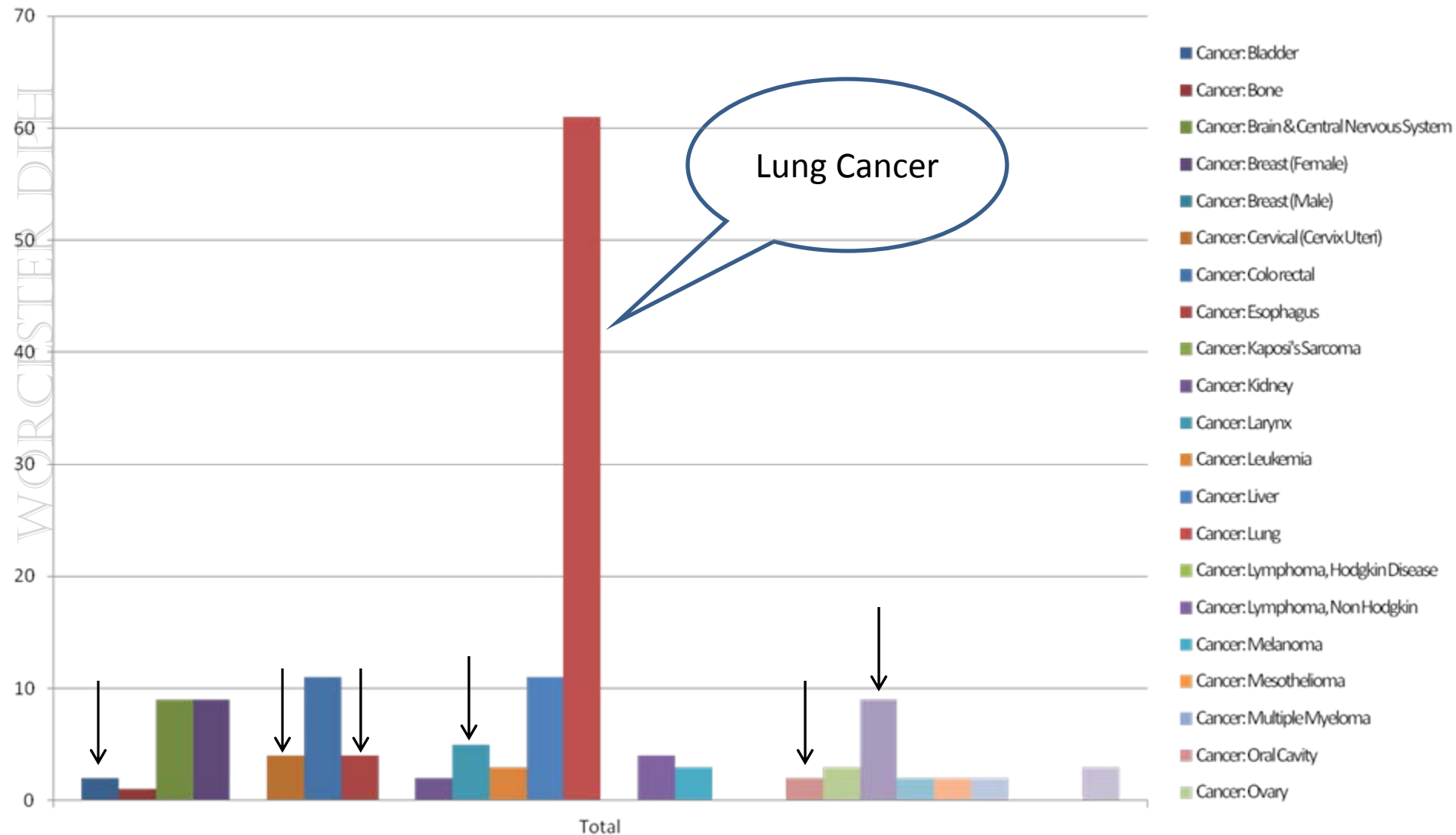
## Causes of Premature Death: Worcester 2008





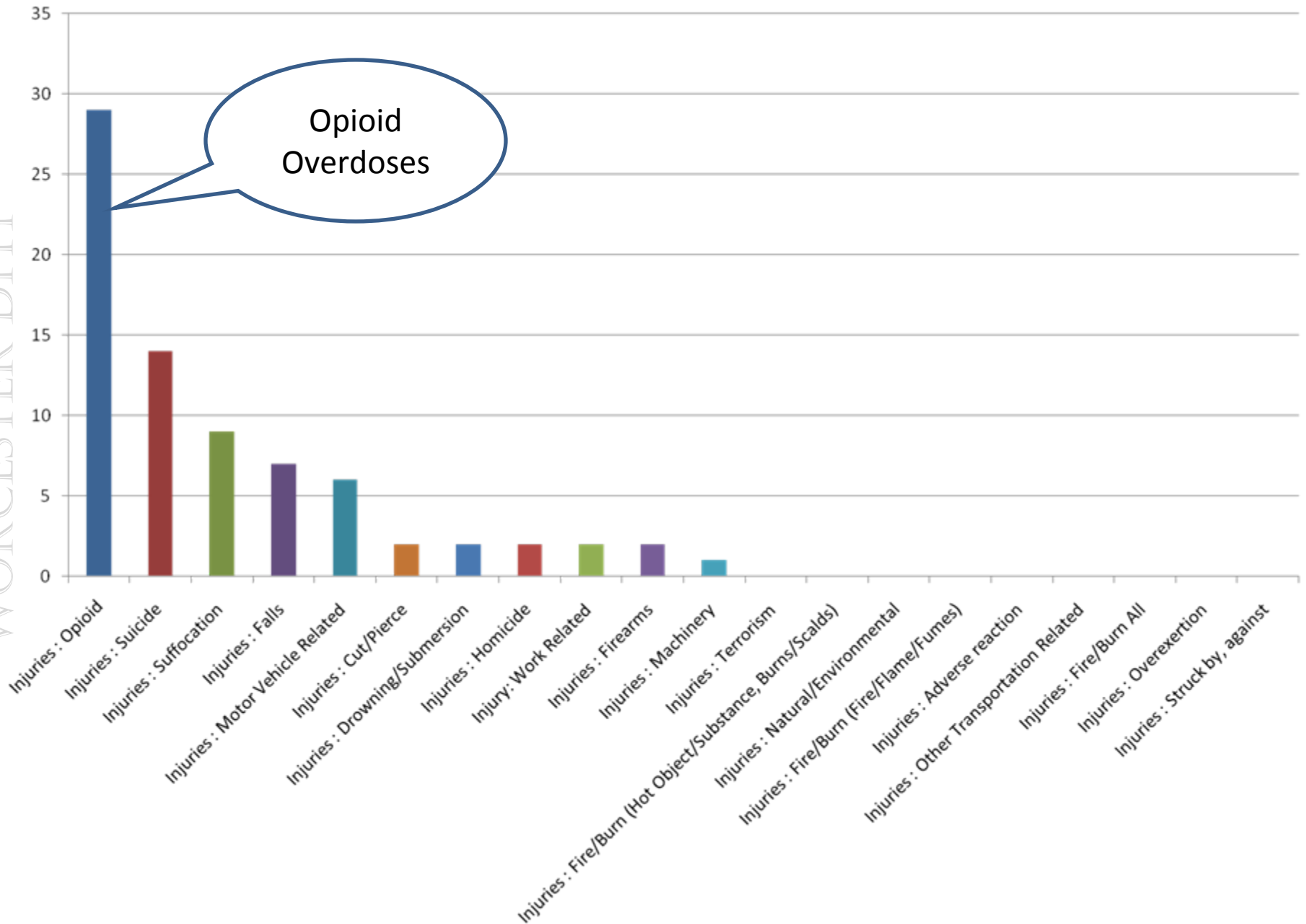
# What cancers do we die prematurely of?

## (2008)



# Injuries & Poisoning Premature Deaths- Worcester 2008

WORCESTER DPH

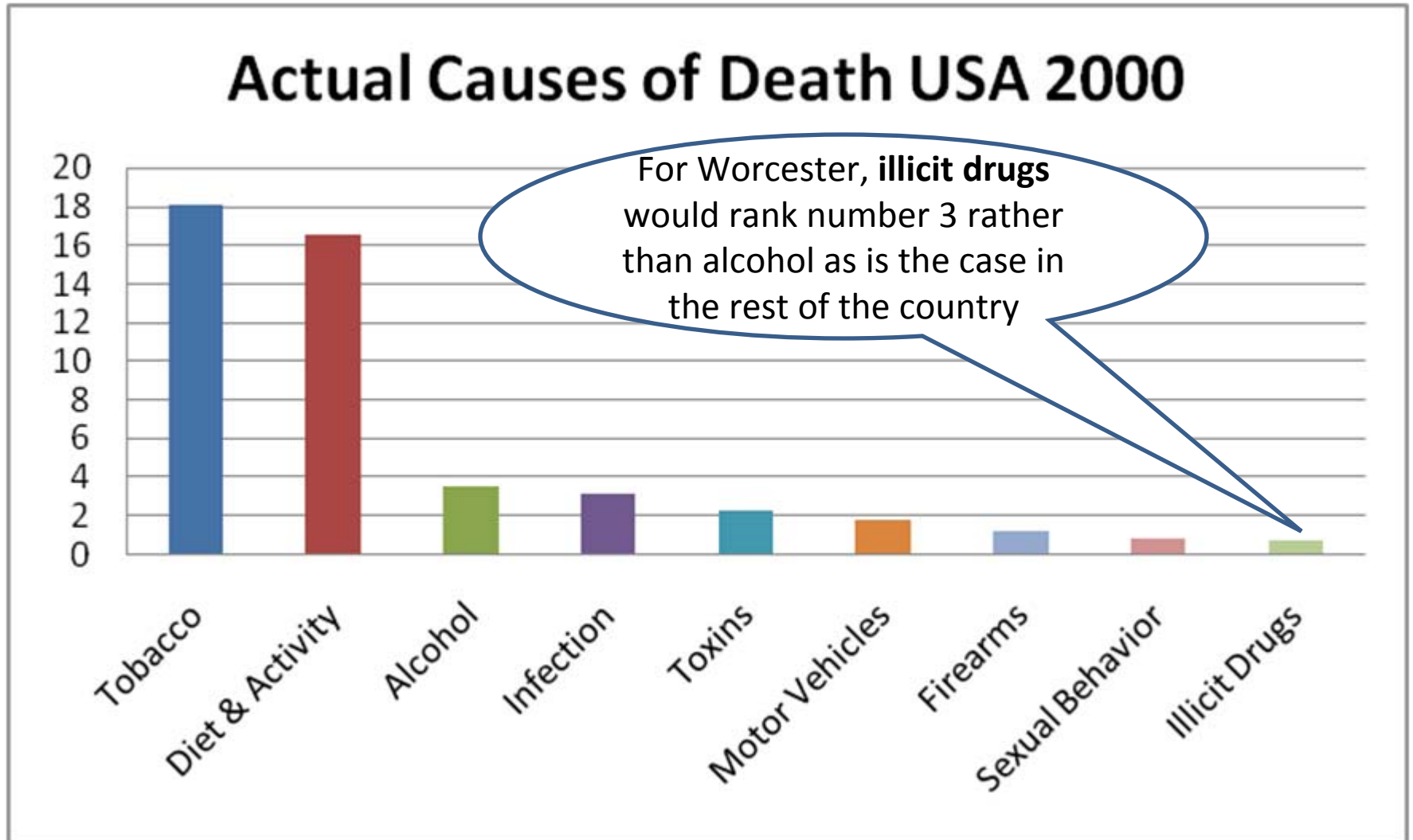


# Setting Priorities

Priorities were set by assessing the **top causes of premature death** as well as aligning them with available resources both within the Division of Public Health & within the community.

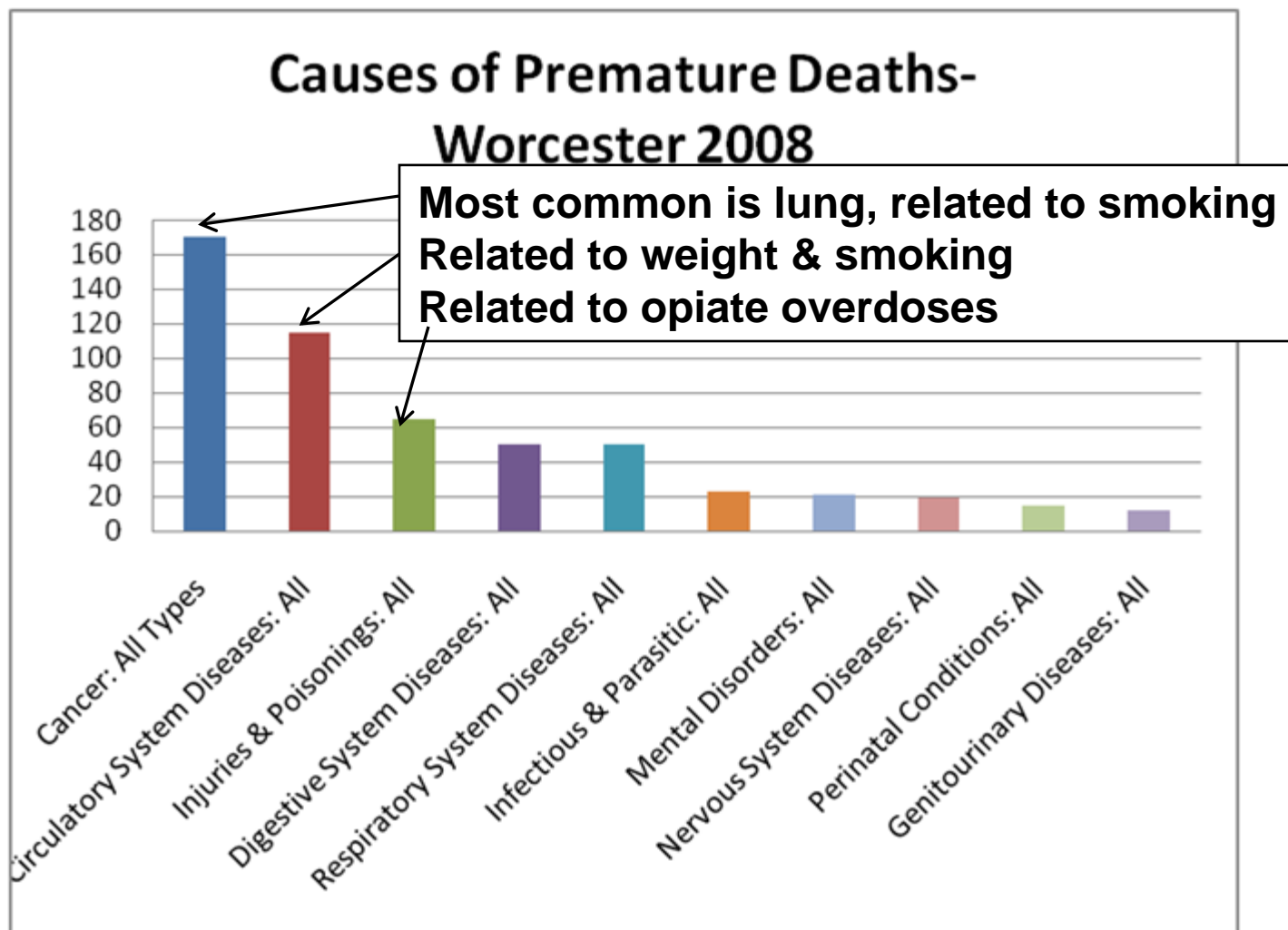
The priorities also align with the [National Prevention Strategy](#).

Researchers have related the cause of death in the U.S. to habits. Worcester has more of an opioid problem than the nation as a whole



# Setting Priorities

In setting priorities we are addressing the habits and conditions that are responsible for the 3 top causes of premature death. The determinants underlying these conditions actually affect much more than these 3 conditions and will have a very broad impact.



# Priorities of the Division of Public Health for 2011-2015:

- **Unhealthy Weight:** leads to diabetes, renal failure, hypertension, elevated cholesterol, stroke, heart attack as well as increases in some cancers, joint deterioration, sleep apnea, gall stones & premature death due to the above
- **Smoking:** ~90% of lung cancer are caused by smoking (~10% due to passive smoking), as well as cancers of the lip, pharynx, larynx, pancreas, bladder, cervix. Risks for premature death due to stroke or heart attack are increased by 3-5X
- **Substance Abuse (especially opioids):** addiction leads to unemployment, crime, infection, organ damage and destabilizes families and leads to deaths due to overdose

# Unhealthy Weight

**Goal: decrease obesity & overweight  
by 5% in 5 years**

- Extent of problem for Worcester:
  - 27% of adults are obese and another ~ 35% are overweight.
  - Nationally the number of children entering school obese has doubled over the past 3 decades to 10%<sup>1</sup>. In Worcester this number exceeds 18%.
  - Children who are obese at age 8 have an >90% chance of being overweight or obese adults<sup>2</sup>.
  - Approximately 1/5 high school students are obese (Worcester ), this is even higher among Hispanics and the poor.
  - 9% of Worcester adults are diabetic, 26% hypertensive and 35% have an elevated cholesterol.
  - Cardiovascular disease is the #2 cause of premature death in Worcester

1. [http://www.cdc.gov/nchs/data/hestat/obesity\\_child\\_07\\_08/obesity\\_child\\_07\\_08.h](http://www.cdc.gov/nchs/data/hestat/obesity_child_07_08/obesity_child_07_08.htm)

2. [tm](http://www.aicn.org/content/76/3/653/T2.expansion.html)

<http://www.aicn.org/content/76/3/653/T2.expansion.html>

# Smoking

**Goal: decrease smoking rate by 5% in 5 years**

- Extent of problem for Worcester:
  - Worcester's rate (2010) is 19% among adults- MA is 14%, Worcester is where MA was 10 years ago
  - 2/3 of smokers begin before age 18<sup>1</sup>
  - Cancer is the #1 cause of premature death in Worcester
  - Lung cancer is responsible for 40% of premature deaths due to cancer in Worcester. 90% of lung cancer deaths are related to smoking.
  - Deaths due to circulatory problems (heart attack & stroke) are the #2 cause of premature death in Worcester- risk increase 3-5X for smokers<sup>2</sup>

1. American Lung Association: <http://www.lungusa.org/stop-smoking/about-smoking/facts-figures/children-teens-and-tobacco.html>

2. Surgeon General's Report on the Effects of Smoking 2010, Page 356, Figure 1



# Substance Abuse- especially Opiates

## Goal: lower deaths from overdoses, prevalence of opiate abuse and recidivism rate

Extent of problem for Worcester:

- **~1-2% of adults** are addicted to opiates in Worcester
- **~1/1000 overdose** per year
- **~1/10,000** die of an overdose per year
- **>1/3 of inmates at Worcester County** jail have a substance abuse problem (this number may be as high as 80%)
- 100% of inmates released from MA state prisons have had previous incarcerations, in Worcester County jail 2/3 have previously been incarcerated, only 1/3 are released to parole supervision, others are supervised through probation. Much of this recidivism is felt to be related to unresolved addiction.
- Large percentage of **sex workers** have substance abuse problems. This is also a source of STDs including HIV, Chlamydia, gonorrhea and syphilis.
- A significant number of the **homeless** have substance abuse problems
- **Hepatitis C** (usually spread through sharing needles) is #2 reportable infection second only to Chlamydia
- Deaths from Opioid overdose **exceeds deaths from auto accidents**

# Any serious effort to address these priorities must focus more on youth

- **Tobacco:** up to 4/5 smokers begin before 18
- **Overweight:** obese at age 8: >90% chance of being overweight adult
- **Substance abuse:** >90% of addicted to illicit or prescription drugs begin before 18\*
- **Education:** a college degree is associated with far better health and years of life



Photo courtesy Cornwall Youth Council

## Our community needs to wrap around efforts in the schools

\* Source: National Center for Drug Abuse at Columbia Univ

# Driving down smoking in Worcester



- HOPE Coalition
- [Massachusetts Tobacco Cessation & Prevention Program](#)
- [Worcester City Council](#)
  - Ban on selling tobacco products at pharmacies & schools
  - Signage ban visible from public roads & parks\*
  - Blunt wrap ban\*
  - Buffer zone around municipal buildings & healthcare institutions
- [Worcester Regional Tobacco Control Collaborative](#)

\* stay pending litigation

# Eat Better



- Grow your own
  - School Gardens
  - Community Gardens
- Shop better
  - Farmers' Markets
  - Healthier Supermarkets
- Cook better
- Eat better in school

## WooFood

- Eat out better
- *Order SMALL!!*

Regional  
Environmental  
Council



WooFood

A healthy change respecting choice & tradition

# Move More

- Move more in your neighborhood
- Move more in the City *MassInMotion*
- Move more in school
- Move more after school
- Move more at work *Pioneering Healthier Communities*
- Do something now!

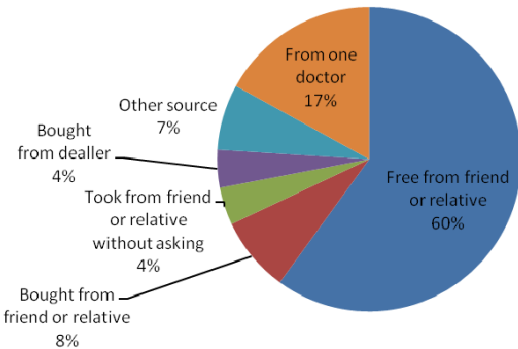
[Healthy Worcester](#)





# Decreasing Opiate use & deaths in Worcester

Source of Pain Relievers for Non-Medical Use (2005)



- Decrease starting with drugs
- among youth

- [Dispose of unused prescription drugs](#)

– 6% of High School Students in MA have taken another's prescription in the past 30 days<sup>2</sup>



- Increase enrollment in [withdrawal programs](#)
  - Case management for prisoners after release
- Decrease overdoses of opiates
- Decrease deaths from opiate overdoses
- Decrease hepatitis C infection



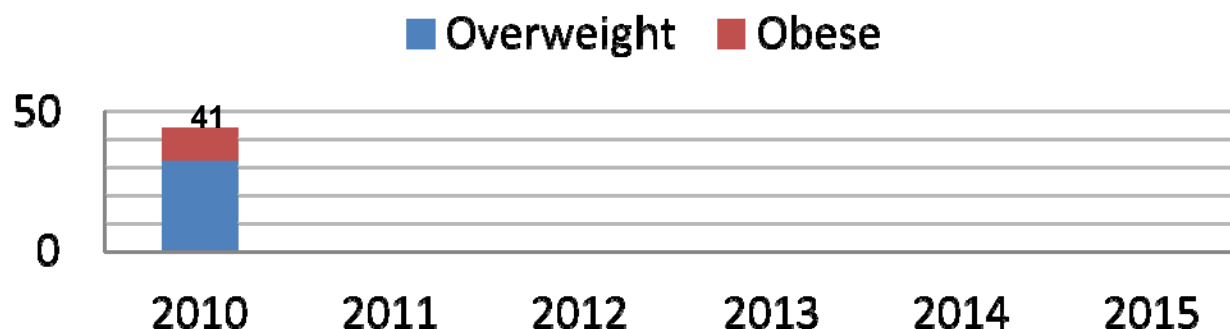
[Learn more about decreasing substance abuse](#)

1. 2009 National Survey on Drug Use; HHS Substance abuse & mental health services admin
2. MYRBS 2009

# Results: Overweight & Obesity

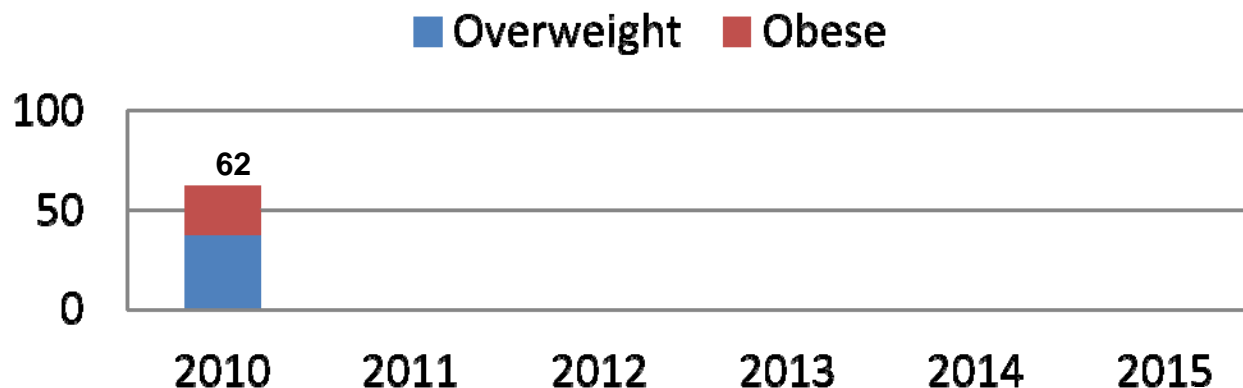
## Grade 1 overweight & obese

Goal: 36%



## Adult overweight & obesity

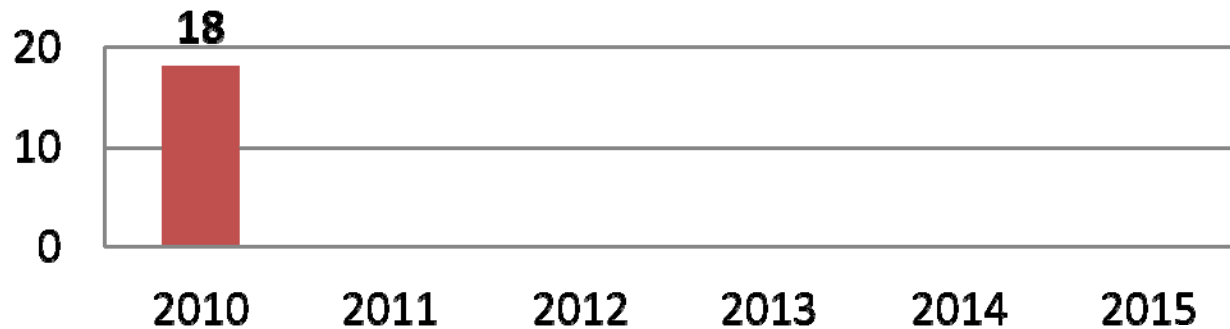
Goal: 57%



# Results: Smoking

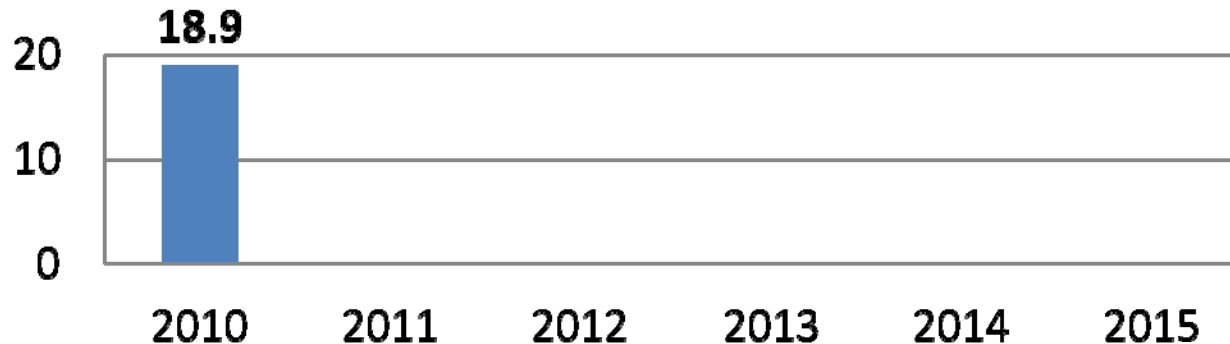
## Adolescent Smokers

**Goal: 13%**



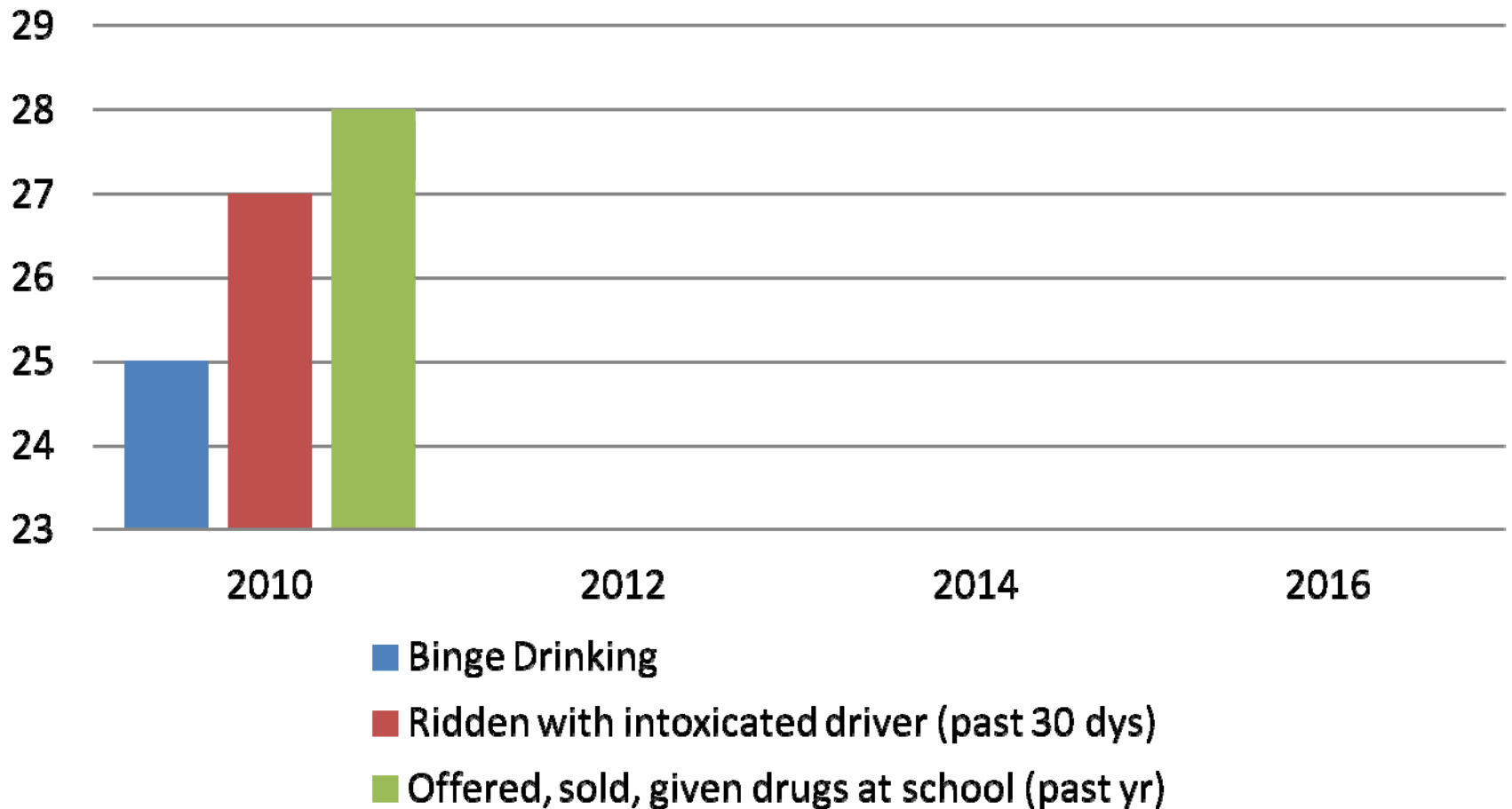
## Adult Smokers

**Goal: 13.9%**





# Results: Substance abuse among youth

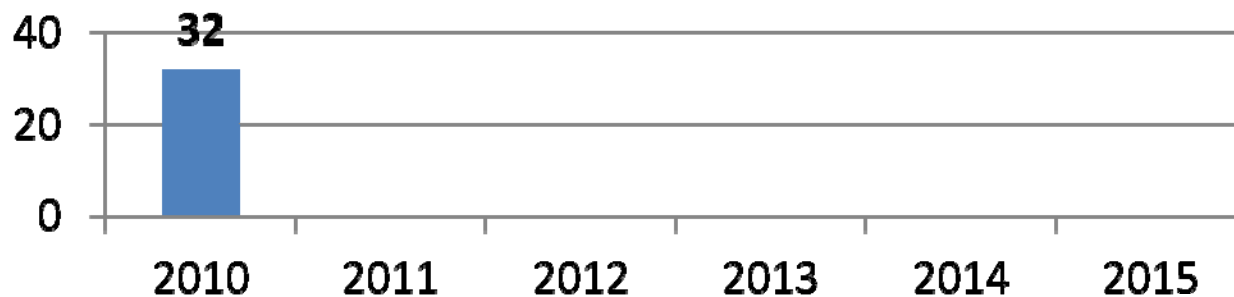


# Results: Opiate use/morbidity/mortality

**ODs**



**OD Deaths**



# Public Health begins with you!

- If your [Body Mass Index](#) (BMI) is  $\geq 25$  or you have a medical condition that may improve with weight loss:
  - Eat less!
  - [Move more!](#)
- If you smoke:
  - [Cut down & stop smoking](#)
- If you use drugs:
  - [get counseling](#)

# Public Health begins with you!

- **Other organizations are encouraged to focus on these on these priorities. Many concerns are intertwined with the priorities selected by the Division of Public Health,** such as substance abuse and mental health.
- **Data by their very nature are dynamic,** always changing and always needing to be updated. While the report aims to be comprehensive, it was not possible to access data for all conditions of interest or every subgroup that we might have wanted to examine in detail.
- We invite residents, businesses and organizations to use this data and **join forces to better our community.** We also encourage you to share your findings back with the Division of Public Health and other community partners.
- You are welcome **to request more data** from the Division: email us with you request

# Survey

- - 1) What information in the report did you find most useful?
- 2) Was there any specific information you were looking for that you did not find?
- 3) Do you have any suggestions for information that you would like to see included in future releases of the report?
- 4) Do you have any suggestions for improvements to the way the information is presented? (For example, do you prefer a certain kind of graph or chart, would you prefer to see more information presented in tables, would you like to see more narrative interpretation of the data?)
- 5) How did you hear about the report?
- 6) Do you have any other feedback?
- 
- Thank you for your input.
- 
- We are interested in learning more about you. Please feel free to provide the following information (optional):
  - 1) Name
  - 2) Organization
  - 3) Phone number
  - 4) Email address

Please submit all responses via email to [health@worcesterma.gov](mailto:health@worcesterma.gov).